

# 2017 Equine Health and Safety Report

Ron Friedman, MS, DVM, DACT  
Equine Medical Director  
Washington Horse Racing Commission  
November 9, 2017

# Equine Health and Safety Report

## Review WHRC

- Medication testing
  - ✓ Threshold changes
  - ✓ Medication violations
  - ✓ Trends of testing and violations 2008-2017
- Racing and training statistics 2008-2017
- Fatalities
  - ✓ Fatalities , ambulance usage, and trends 2007-2017
- Prerace exams, scratches, Veterinarian's List
- Equine Medical Director Concerns 2009-2017
- Equine Medical Director Recommendations 2009-2017

# Threshold Changes for 2017

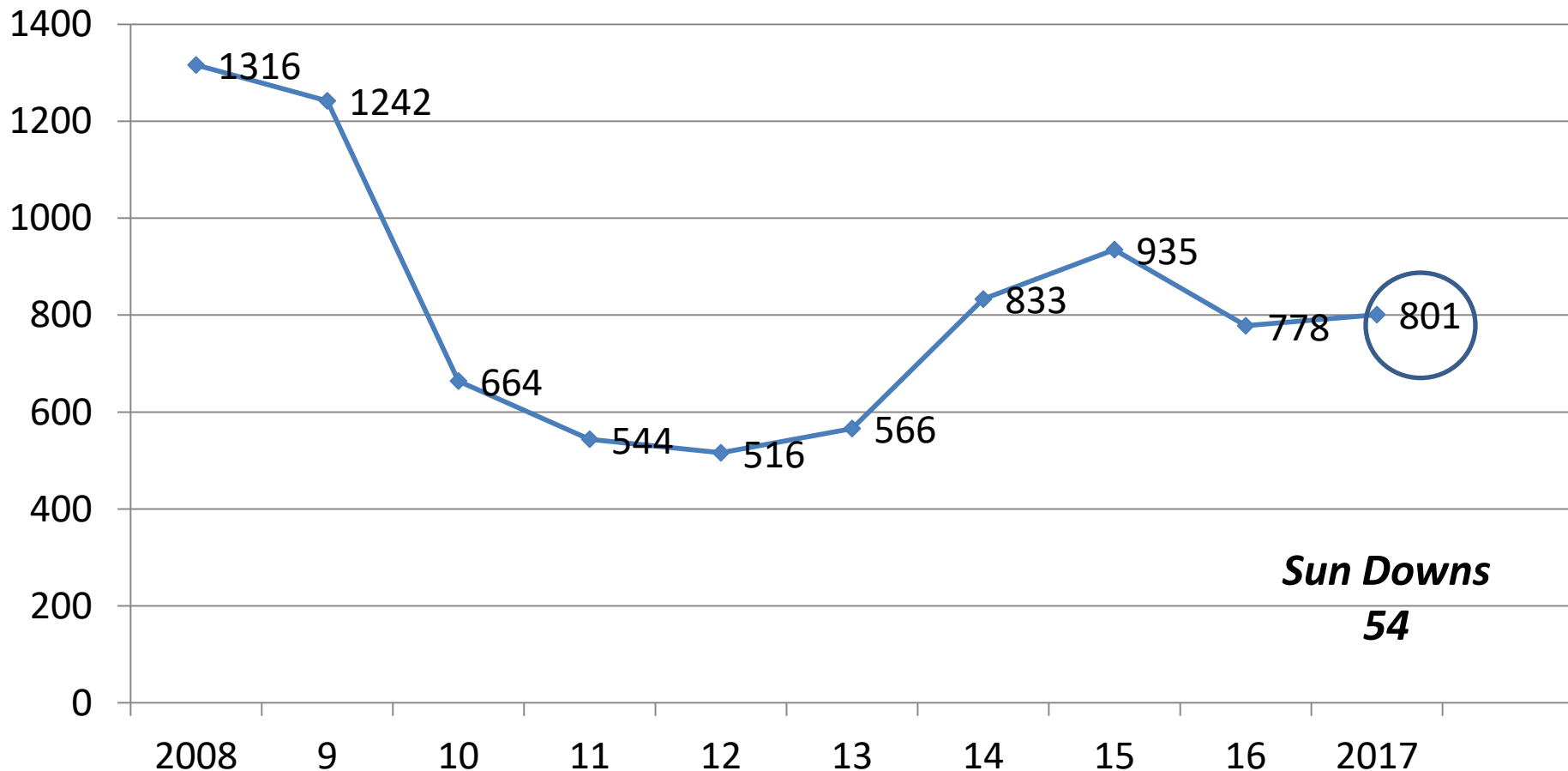
- WAC 260-70-630 changed the following medication thresholds for 2017 . Numbers in parentheses were 2016 thresholds

– <b>Acepromazine</b>	↓	<b>10 ng/ml</b> ( <i>from 25ng</i> )
– <b>Boldenone</b>	↑	<b>1ng/ml</b> G,F,M ( <i>from Level of detection</i> )
		<b>15 ng/ml</b> intact males ( <i>Level of detection</i> )
– <u>Clenbuterol</u>	↓	<u>Level of detection</u> QH/mixed breed (25pg)
		<u>HAIR</u> , Serum, plasma,
– <b>Carboxydetomidine</b>		_____ <b>1 ng/ml</b> <u>urine</u> ADDED
– <u>Dexamethazone</u>	↓	_____ <b>0.5 ng/ml</b> (1ng)
– <b>Fircocoxib</b>	↓	_____ <b>20 ng/ml</b> (40ng)
– <u>Methylprednisilone</u>	↓	_____ <b>400 pg/ml</b> (1,200pg)

# Medication Testing at Emerald Downs

by the numbers **2008-2017**

**Blood**



# Medication Violations for 2017

There were no violations for:

- Improper medication administration
- Failure to deliver forms on time
- Presence of contraband substances

# Terminology- Permitted, Prohibited & Violations by RCI Penalty Class

- Some misunderstanding exists around the terms
  - ***Permitted or Prohibited.***
- WHRC Rules in the past listed medications as
  - ***Permitted or Prohibited medications and or substances,***
  - the terminology is outdated and often misinterpreted
- Since 1996, WAC 260-70-630 established thresholds for 37 commonly used medications and 13 endogenous, dietary, and environment substances.
- Both Prohibited and Permitted medications may have legitimate therapeutic use in the horse.
  - BUT may affect the performance of a horse
  - Not allowed during racing.

# Terminology- Permitted, Prohibited & Violations by RCI Penalty Class

- Permitted medications have an established concentration, or threshold, that ***cannot be exceeded*** when a horse is in a race.
- Prohibited medications or substances cannot be present in any concentration.
- The **Association of Racing Commissioners International (ARCI)** or **RCI** has established **Penalty Classes**
- more accurately define excesses of medications and substances as ***threshold overages or violations***
- ***Categorize them into RCI Penalty Class 1 -5***

# Terminology- Permitted, Prohibited & Violations by RCI Penalty Class

## RCI Penalty Class 1

- Stimulant or depressant drugs
  - Highest potential to affect performance
  - No generally accepted medical use in race horses

## RCI Penalty Class 2

- High potential to affect performance, but less than Class 1
  - Not generally accepted as therapeutic agents in racing horses
  - Or, they are therapeutic agents with a high potential for abuse.



# Terminology- Permitted, Prohibited & Violations by RCI Penalty Class

## RCI Penalty Class 3

- May or may not have generally accepted use in the racing horse BUT
  - Less potential to affect performance than Class 2
  - Pertinent ones: Bronchiodilators (Clenbuterol), anabolic steroids
  - Anti histamines with sedative properties

## RCI Penalty Class 4

- Therapeutic medications with less potential to affect performance, than Class 3
  - Anti inflammatory corticosteroids (methyprednisilone, dexamethasone, triamcinilone)
  - diuretics (lasix),
  - Anti histamines and muscle relaxants with CNS effects
  - Non steroidal anti inflammatories (NSAID) (phenylbutazone, flunixin, ketoprofen)

# Terminology- Permitted, Prohibited & Violations by RCI Penalty Class

## RCI Penalty Class 3

- May or may not have generally accepted use in the racing horse BUT
  - Less potential to affect performance than Class 2
  - Pertinent ones: Bronchodilators (Clenbuterol), anabolic steroids
  - Anti histamines with sedative properties

## RCI Penalty Class 4

- Therapeutic medications with less potential to affect performance, than Class 3
  - Anti inflammatories corticosteroids (methyprednisilone, dexamethasone, triamcinilone)
  - diuretics (lasix),
  - Anti histamines and muscle relaxants with CNS effects
  - Non steroidal anti inflammatories (NSAID) (phenylbutazone, flunixin, ketoprofen)

## RCI Penalty Class 5

- Therapeutic medications with established concentration limits for racing
- Certain miscellaneous agents or other medications
- Included specifically are agents with very localized actions
  - Anti-ulcer drugs, anti-allergic drugs
  - Some may have the potential to affect testing procedures

# Medication Threshold Violations – WHRC 2017

<b>Emerald Downs</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>
RCI Class 3, 4, 5 threshold violations	5	8	1	4	6	<b>8</b>
<b>Sun Downs</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>
RCI Class 3 Threshold violations	2	0	2	0	5	<b>6</b>

# Medication Threshold Violations – WHRC 2017

<b>Emerald Downs</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>
RCI Class 3, 4, 5 threshold violations	5	8	1	4	6	<b>8</b>
<b>Sun Downs</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>
RCI Class 3 Threshold violations	2	0	2	0	5	<b>6</b>

- **Class 3 medication**
  - Clenbuterol (x 6)
    - Prohibited in QH
    - (anabolic action)
  - Methocarbamol
    - muscle relaxant
  - Stanozolol (x2)
    - Prohibited anabolic steroid

# Medication Threshold Violations – WHRC 2017

<b>Emerald Downs</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>
RCI Class 3, 4, 5 threshold violations	5	8	1	4	6	<b>8</b>
<b>Sun Downs</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>
RCI Class 3 Threshold violations	2	0	2	0	5	<b>6</b>

- **Class 3 medication**

- Clenbuterol (x 6)
  - Prohibited in QH
  - (anabolic action)
- Methocarbamol
  - muscle relaxant
- Stanozolol (x2)
  - Prohibited anabolic steroid

- **Clenbuterol 6x > *All QH***

- **Sun Downs**

- 3 from *hair* testing
    - 1 from serum

- **Emerald Downs**

- 2 from *hair* testing

- **Stanozolol (x2)**

- ***All QH* at Sun Downs**

# Medication Threshold Violations – WHRC 2017

<b>Emerald Downs</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>
RCI Class 3, 4, 5 threshold violations	5	8	1	4	6	<b>8</b>
<b>Sun Downs</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>
RCI Class 3 Threshold violations	2	0	2	0	5	<b>6</b>

- **Class 3 medication**

- Clenbuterol

- Prohibited in QH
    - (anabolic action)

- Methocarbamol

- muscle relaxant

- Stanozolol

- Prohibited anabolic steroid

- **Class 4 Medication**

- **Phenylbutazone**

- **Flunixin**

- Both non steroidal anti inflammatory (NSAID)

- **Triamcinolone**

- Steroid anti inflammatory

- **DMSO**

- Anti inflammatory

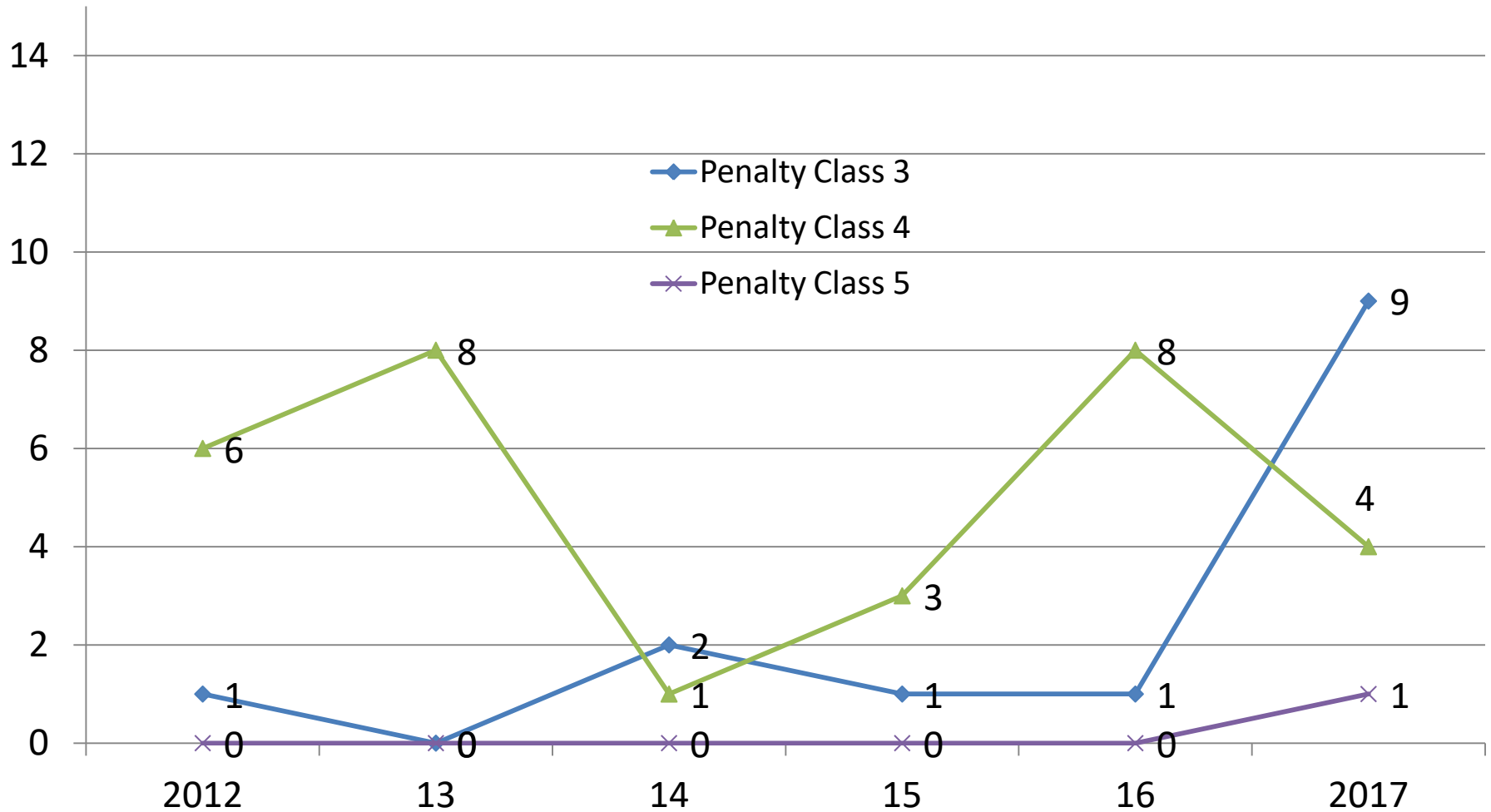
- **Class 5 Medication**

- **Omeprazole**

- Anti ulcer medication  
(Potentially interferes with testing)

# Violations by RCI Penalty Class

2015-17



# Violations by RCI Penalty Class

2015-17

- Class 3 medication

- **Clenbuterol**

- Prohibited in QH
    - (anabolic action)

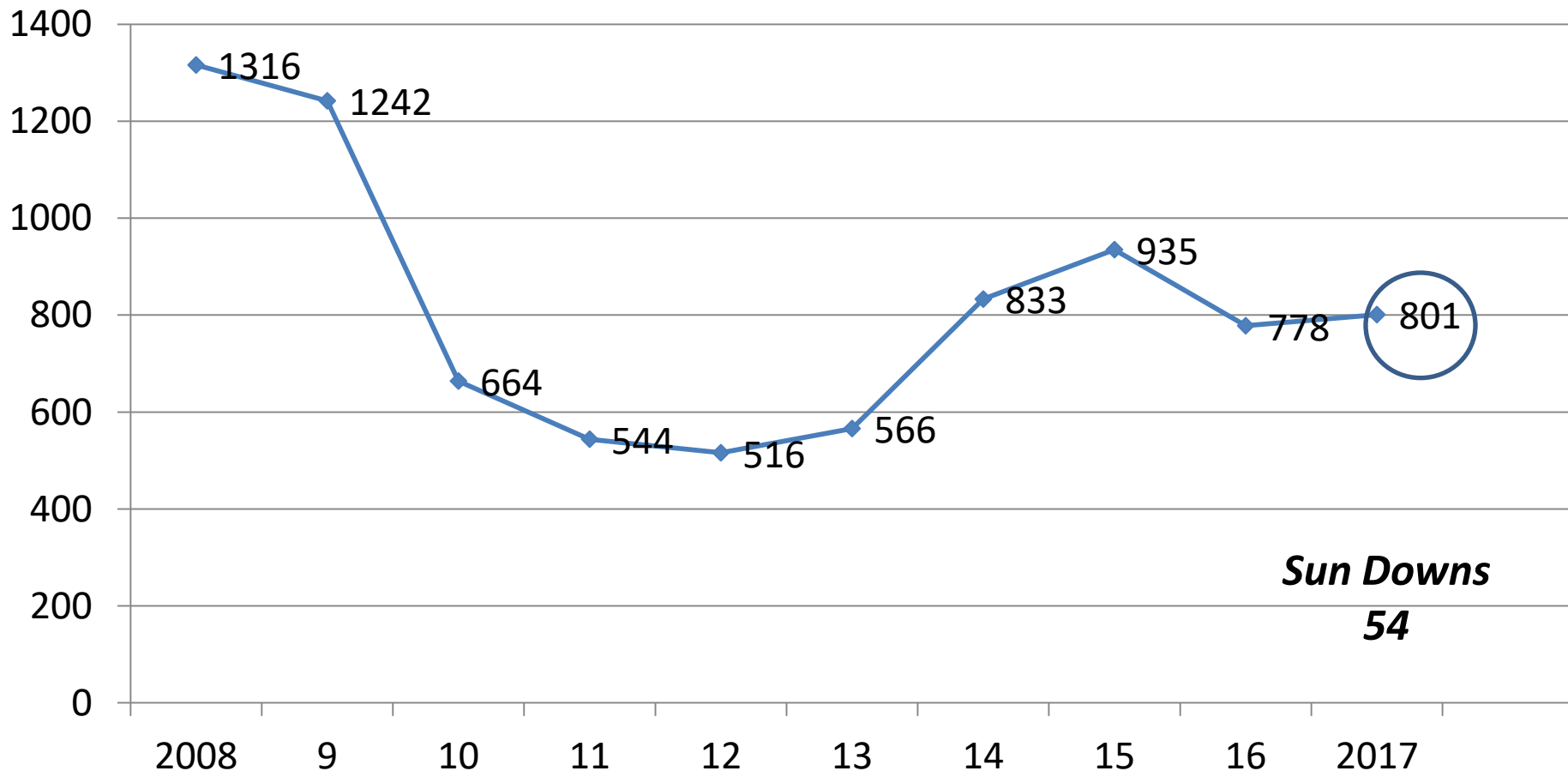




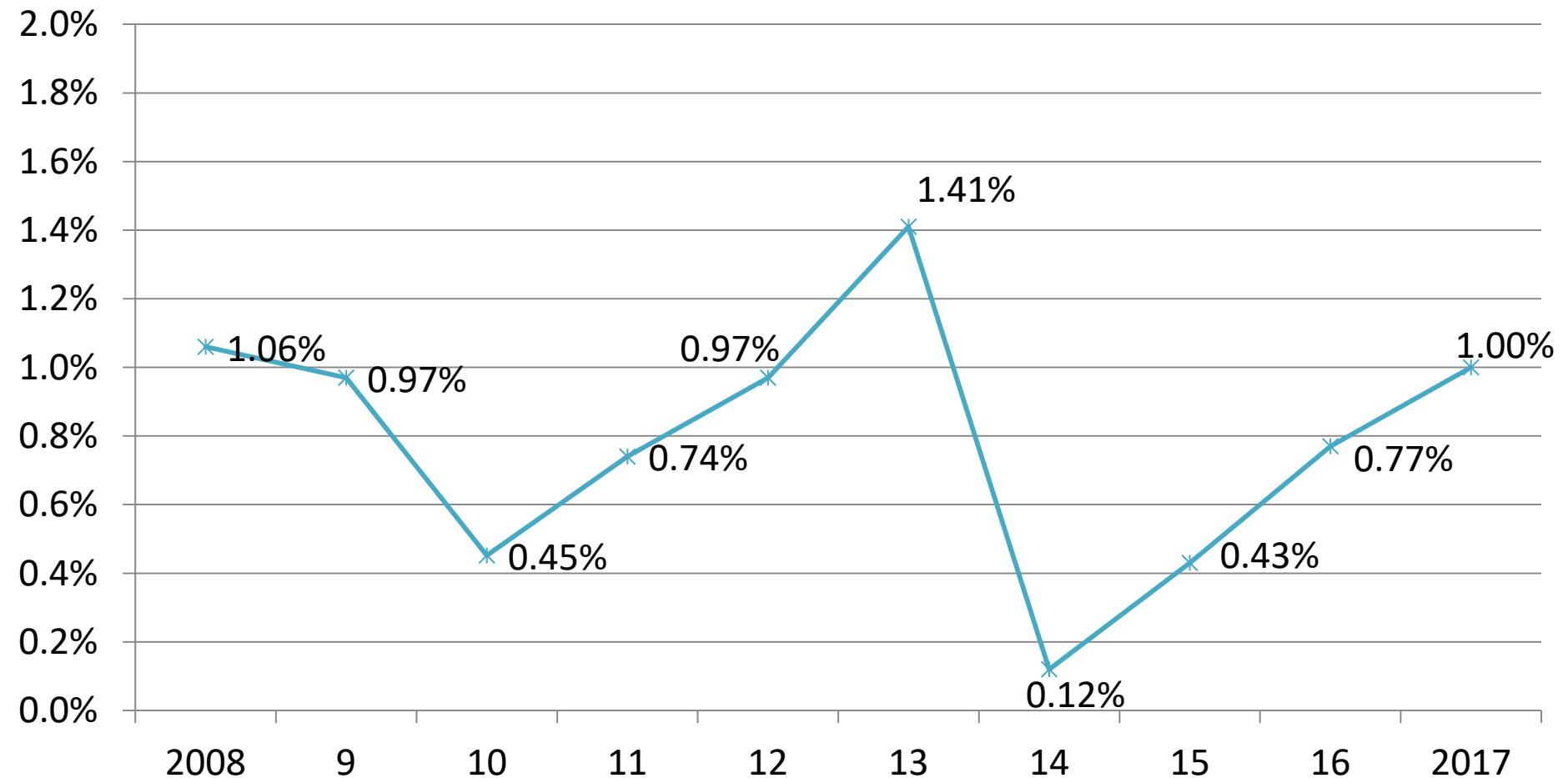
# Medication Testing at Emerald Downs

by the numbers **2008-2017**

**Blood**

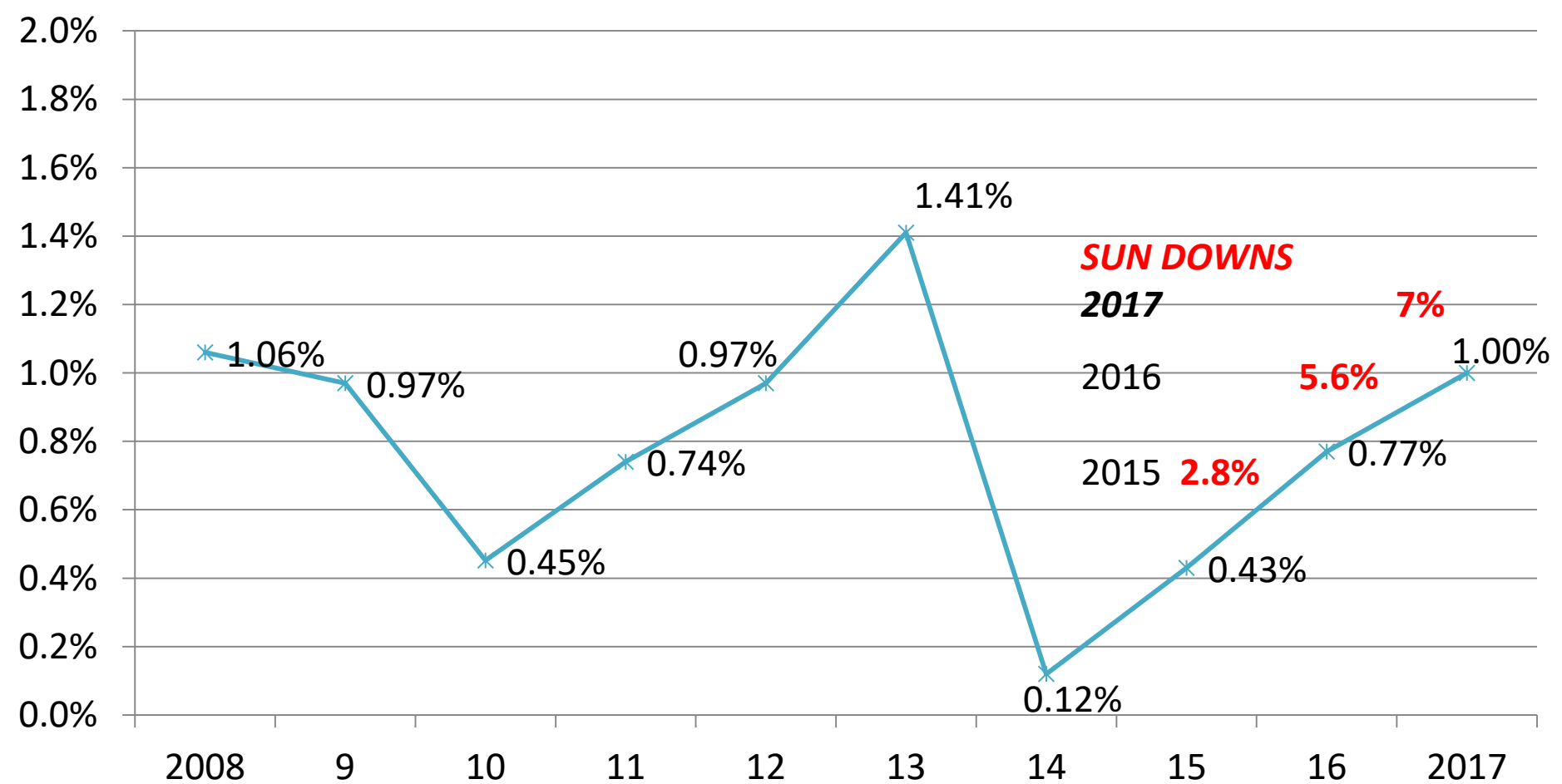


# % Violations at Emerald Downs of total submission 2008-2017



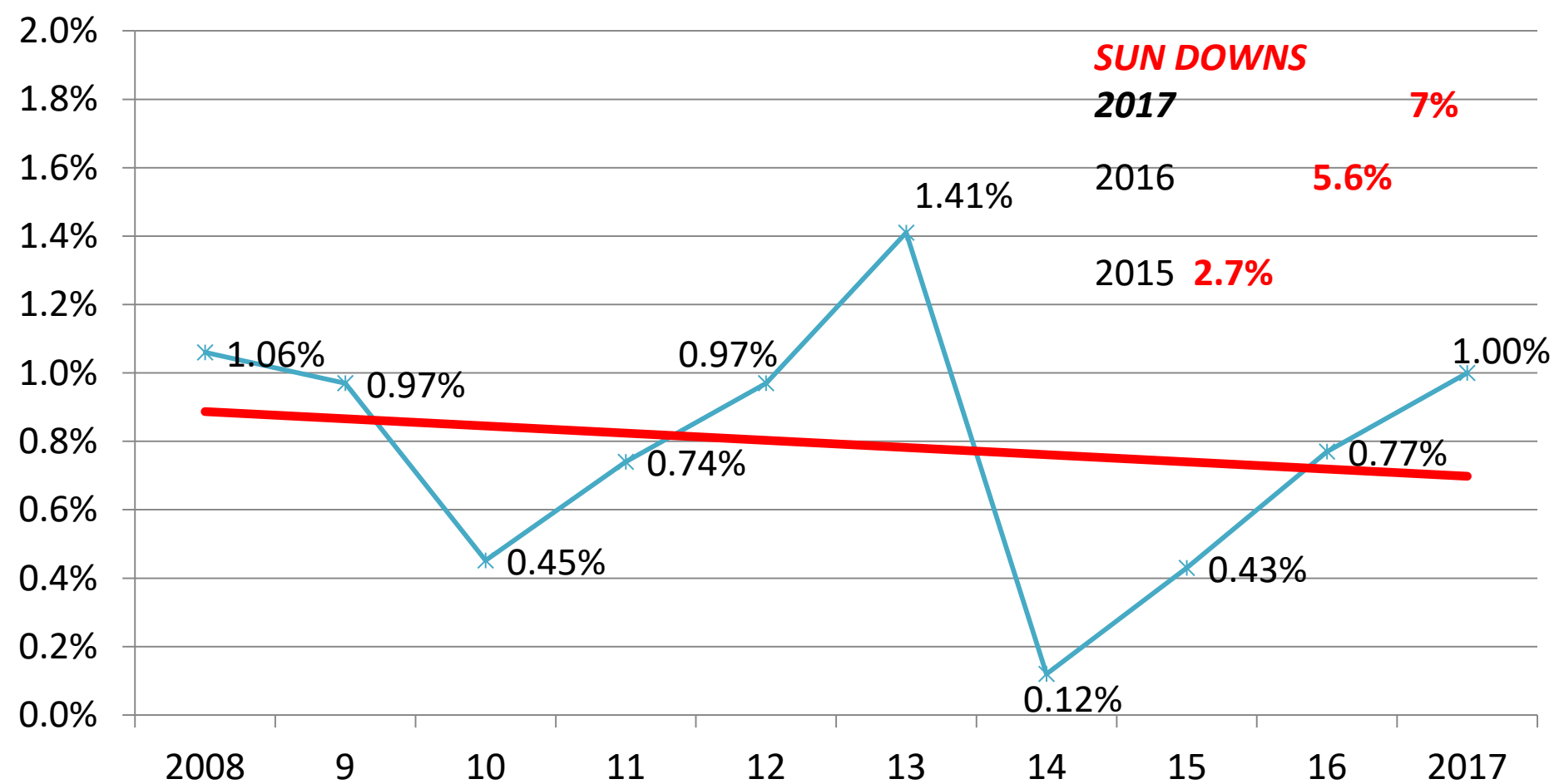
# % Violations at Emerald Downs & Sun Downs

% of total submission 2008-2017



# % Violations at Emerald Downs & Sun Downs

% of total submission 2008-2017



# Racing Days, Training Days, Races & Starters 2008 - 2017

Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Racing Days	91	91	91	90	82	81	75	73	70	70	72
Training Days	241	240	238	221	208	187	218	215	215	202	210
Races	824	827	815	772	778	690	665	641	647	599	604
Starters	6,252	6,362	6,058	5,429	4,898	4,390	4,427	4,022	4,438	4,450	4,223
Racing Fatalities	15	11	16	9	10	8	8	5	11	8	<b>6</b>
Fatalities/ 1,000 Starts	2.40	1.73	2.64	1.65	2.04	1.80	1.81	1.24	2.47	<del>1.57</del> 1.80	<b>1.42</b>

# Status at Time of Fatality

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Racing	11	16	9	10	8	8	5	11	8	<b>6</b>
Starting Gate	0	0	0	0	0	0	0	0	0	<b>0</b>
Training	11	8	12	5	4	4	8	4	4	<b>4</b>
Paddock	0	1	0	1	0	0	0	0	0	<b>0</b>
Barn	14	10	10	9	8	4	4	5	3	<b>8</b>
Total	36	35	31	35	20	16	17	20	15	<b>18</b>

# Racing Fatalities

On the track and euthanized by WHRC veterinarian – 3

Practicing veterinarian within 24 hours of race – 3

## Causes

Scapula Fracture – 1

Cannon Bone Fracture – 1

Carpal Fracture – 1

Fetlock Luxation – 1

Sesamoid Fracture – 2

# Training Fatalities

Humeral fracture - 4

## Barn Fatalities

Respiratory - 3

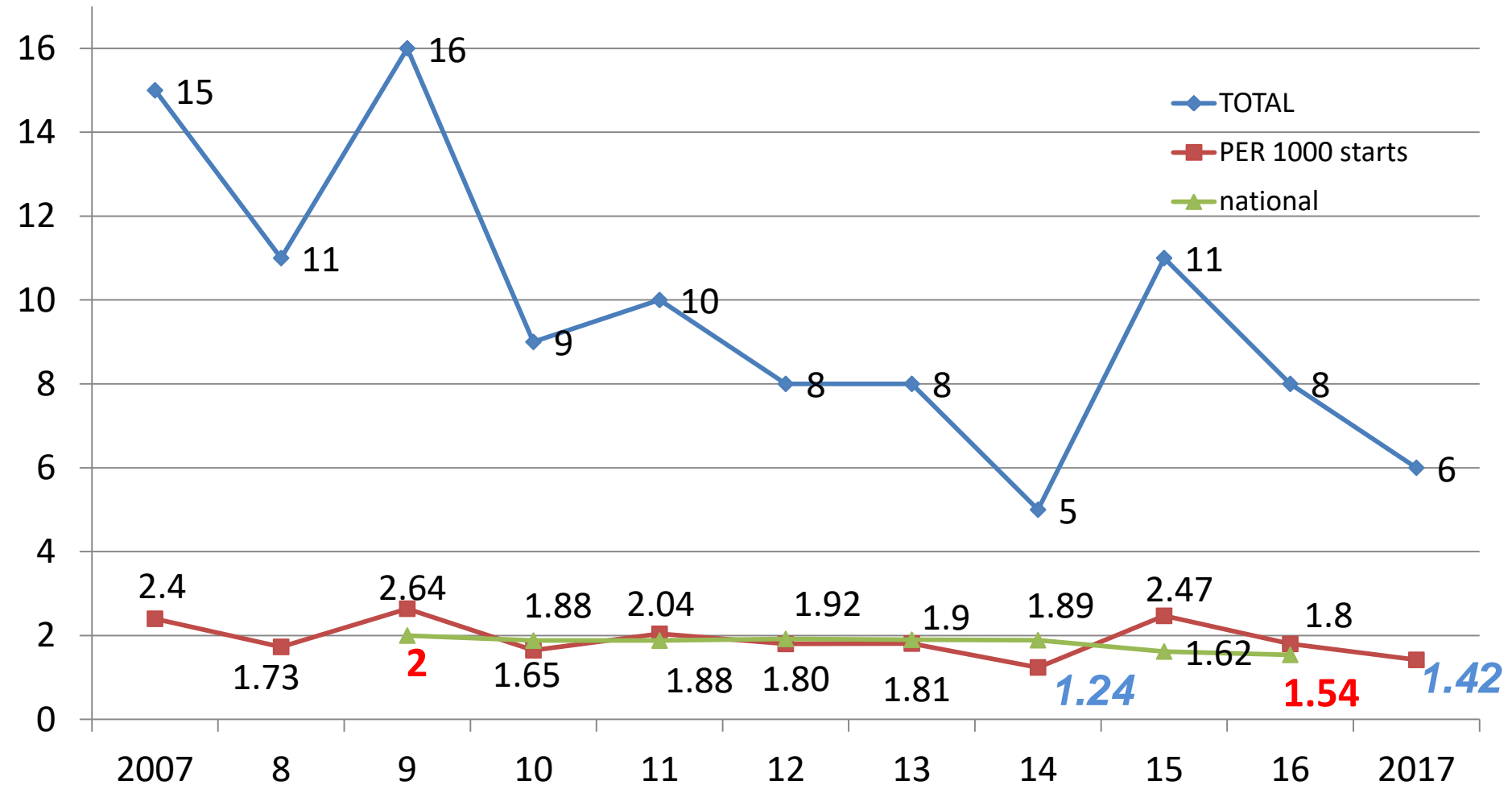
Gastro-intestinal - 3

Septic Joint - 1

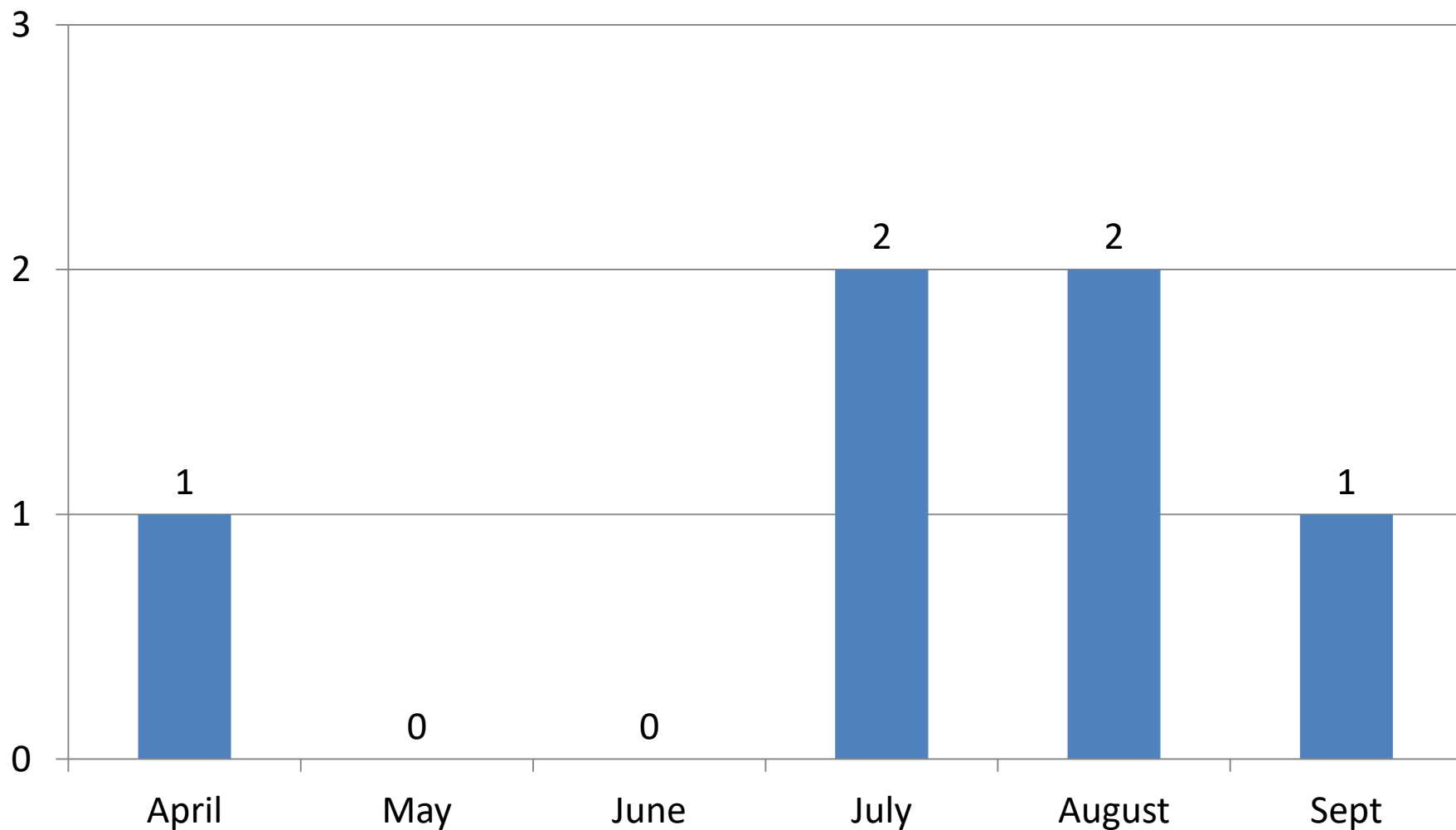
Anaphylaxis - 1



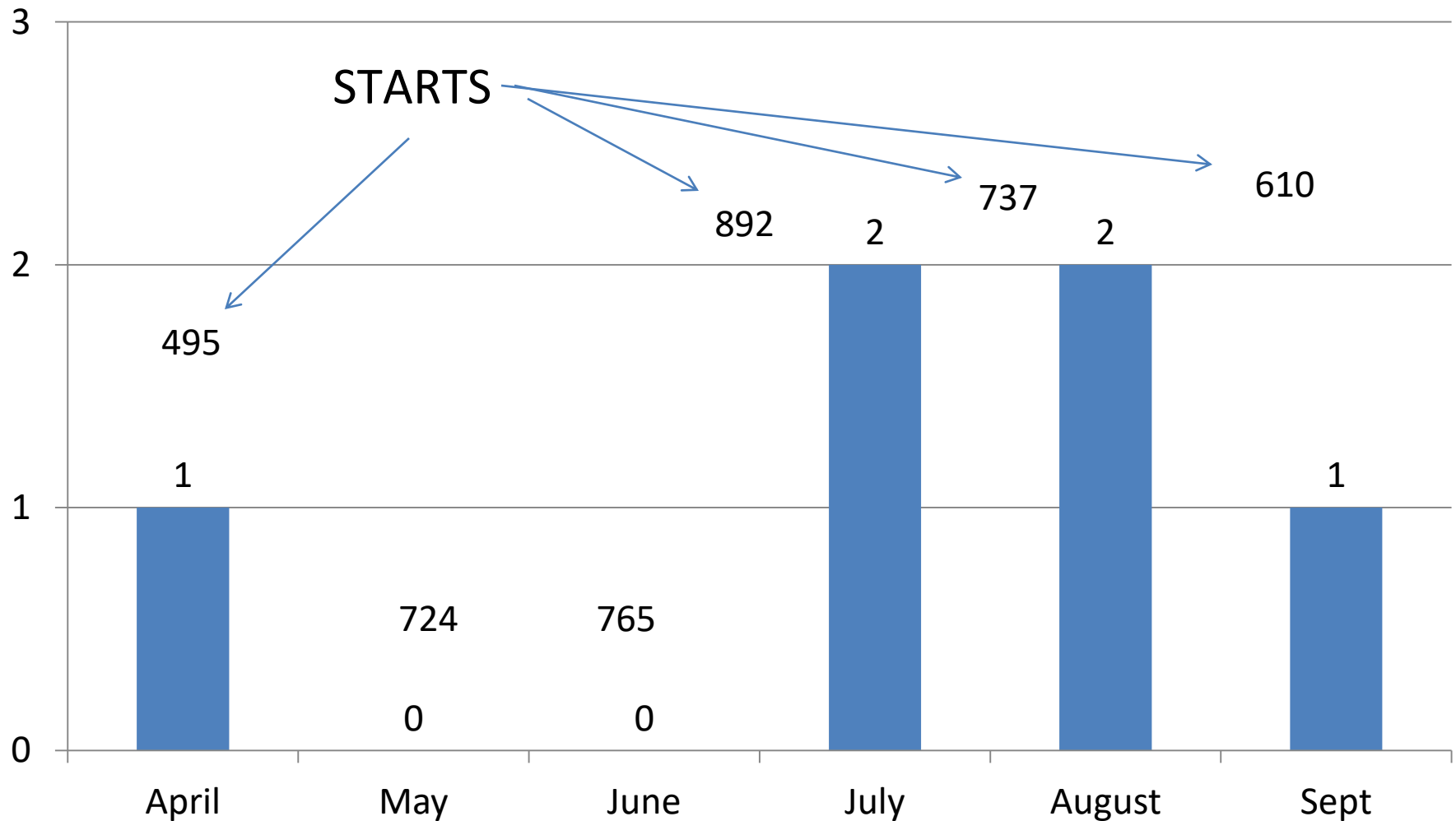
# Fatalities from racing 2007-2017



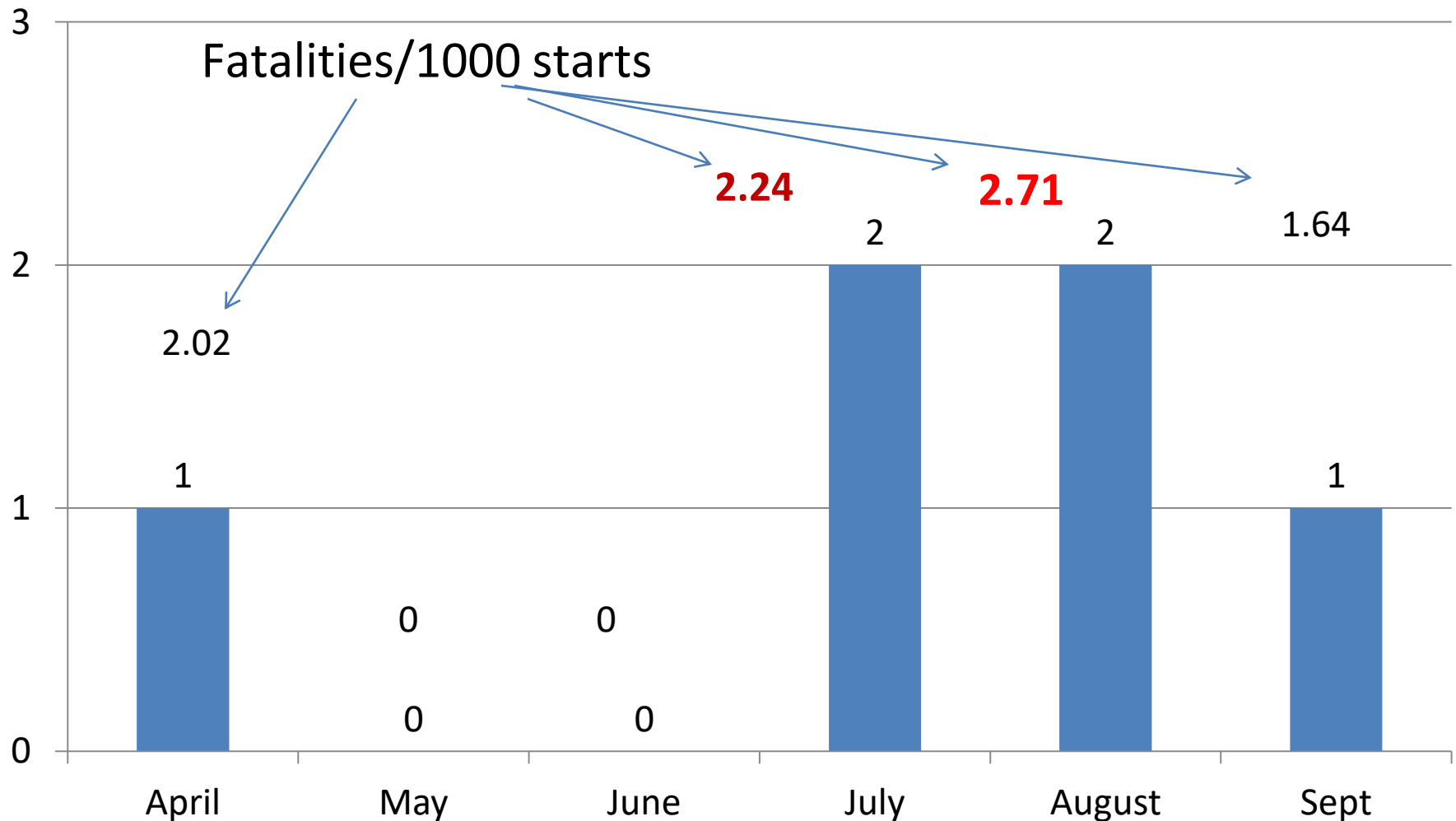
# Racing Fatalities by month 2017



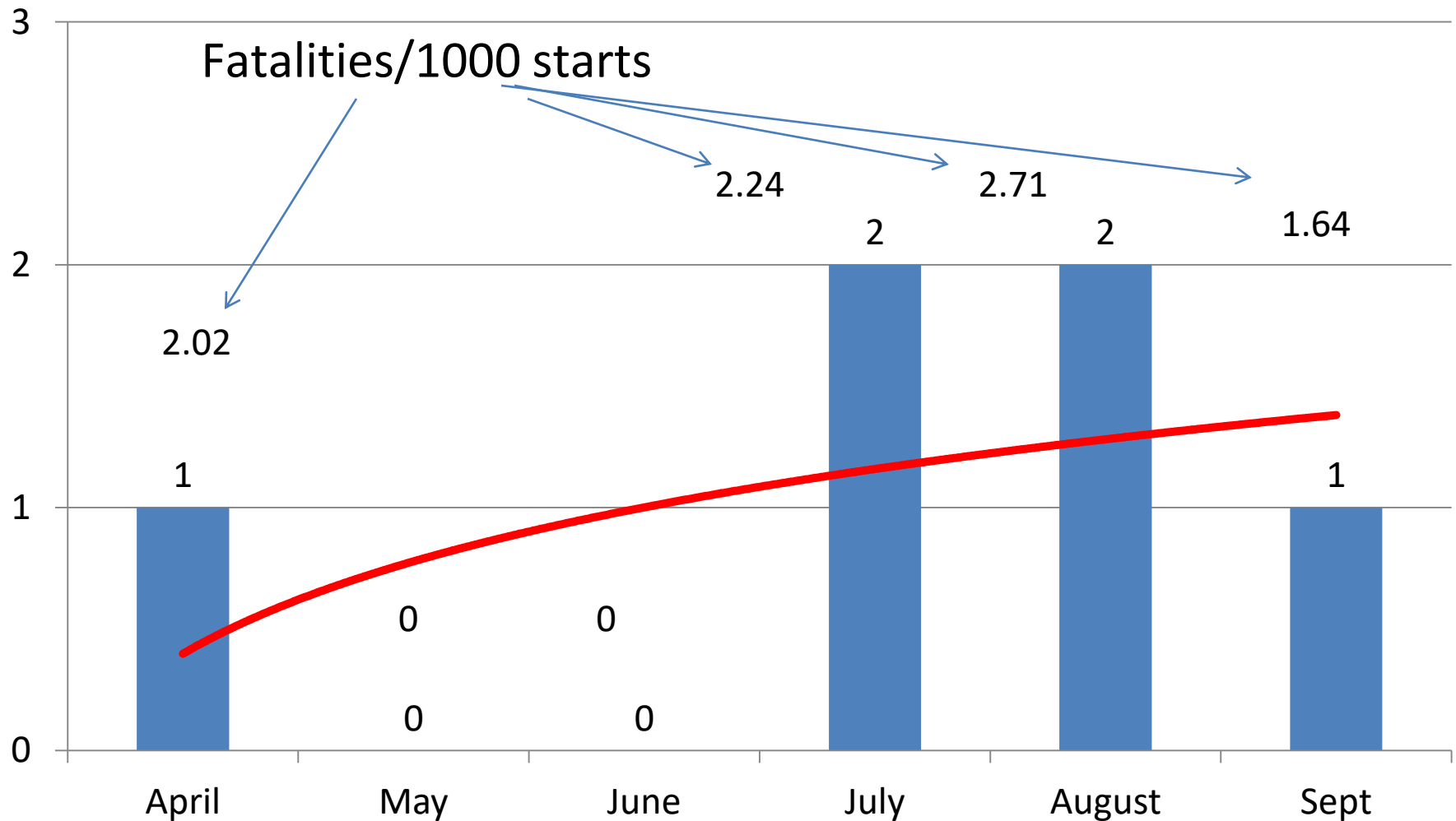
# Racing Fatalities by month 2017



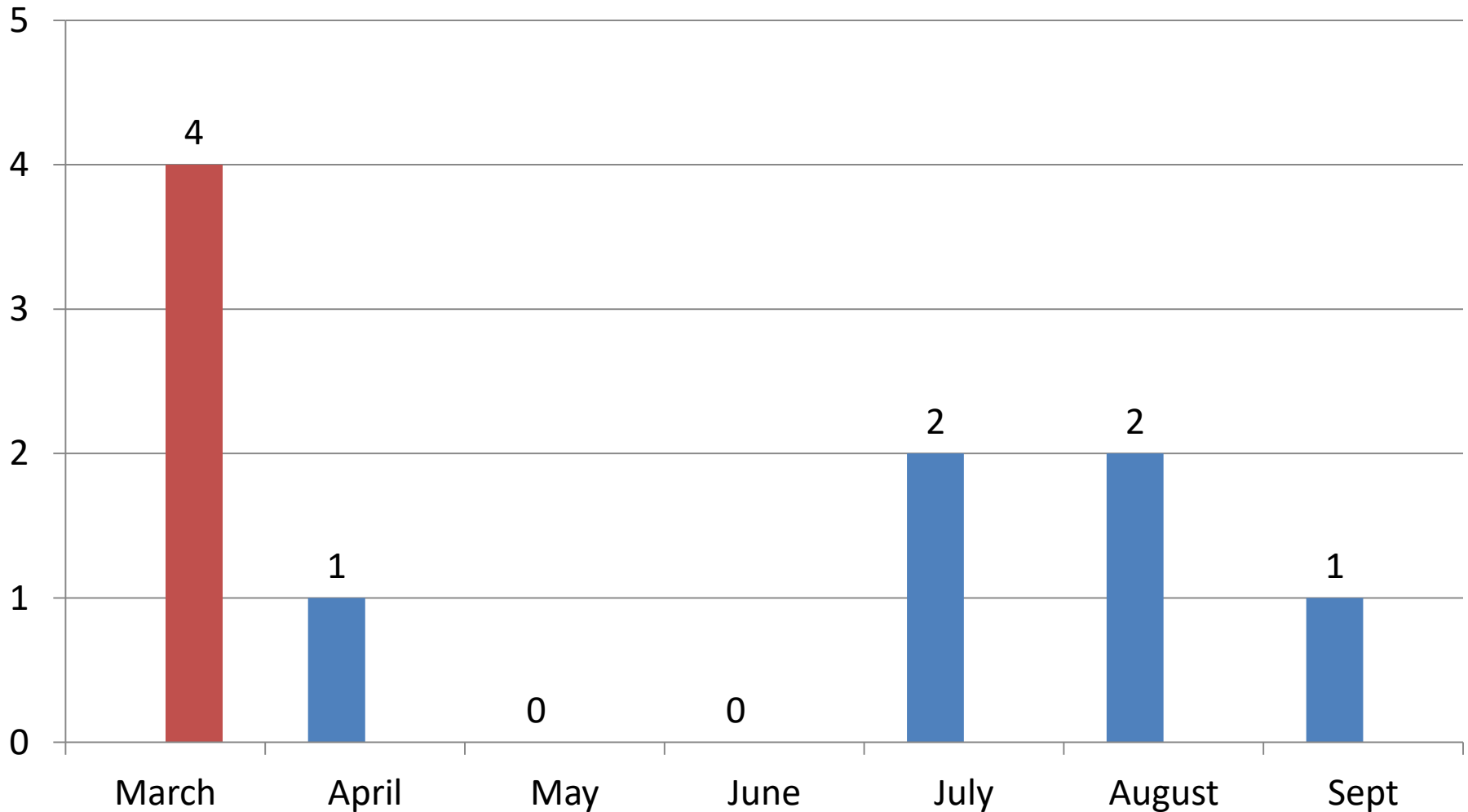
# Racing Fatalities by month 2017



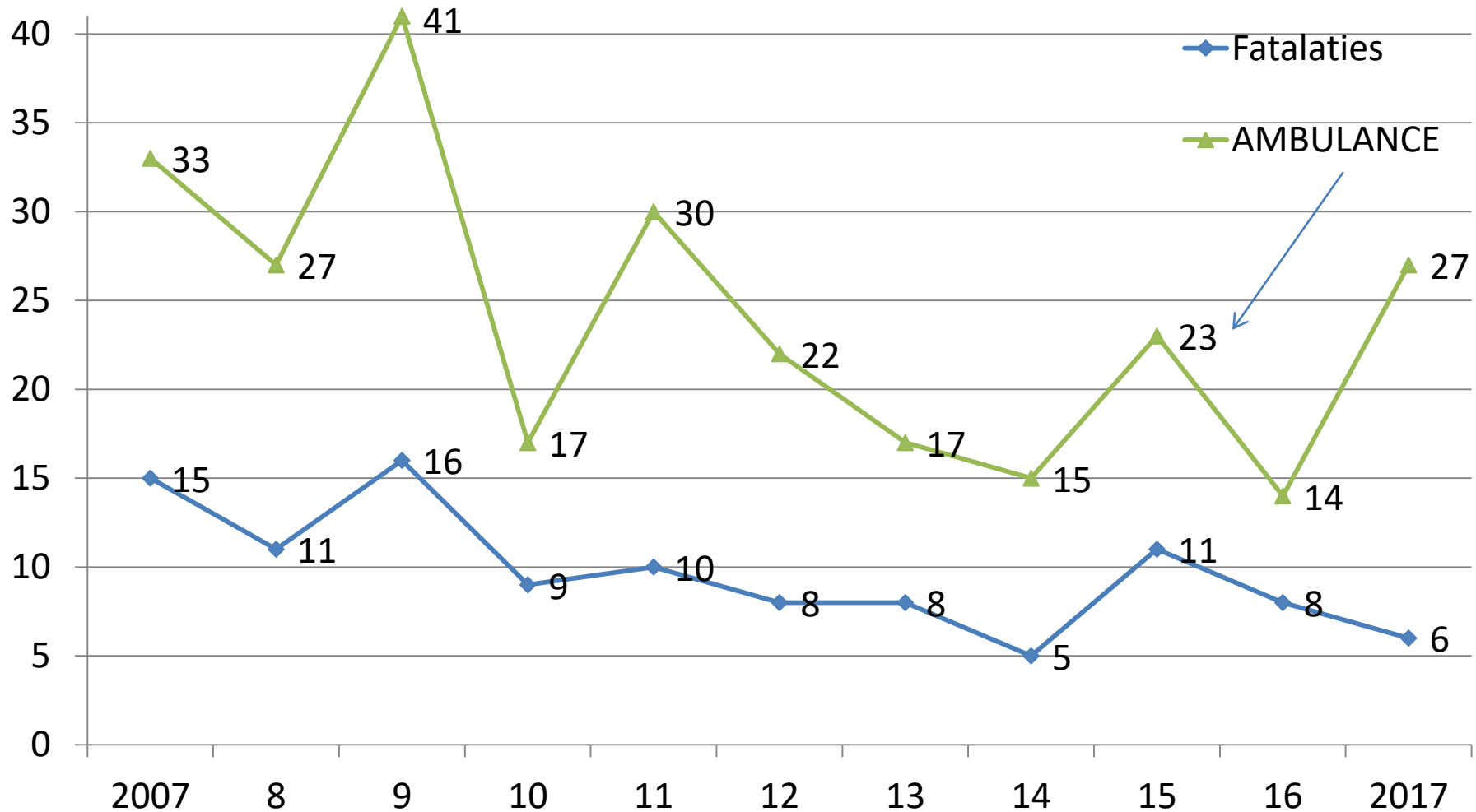
# Racing Fatalities by month 2017



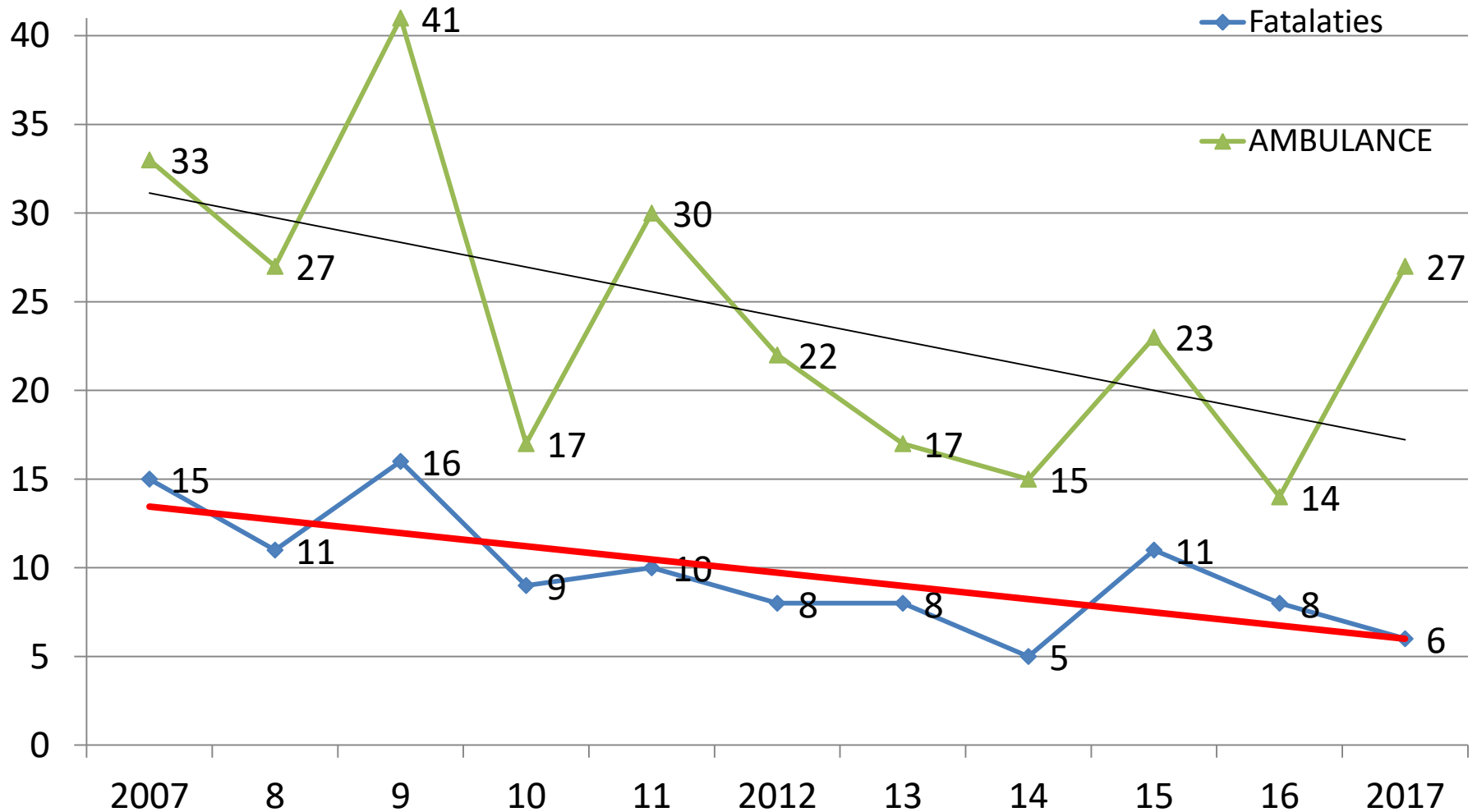
# Racing & Training Fatalities<sub>by month</sub> 2017



# Fatalities & Ambulance 2007-2017

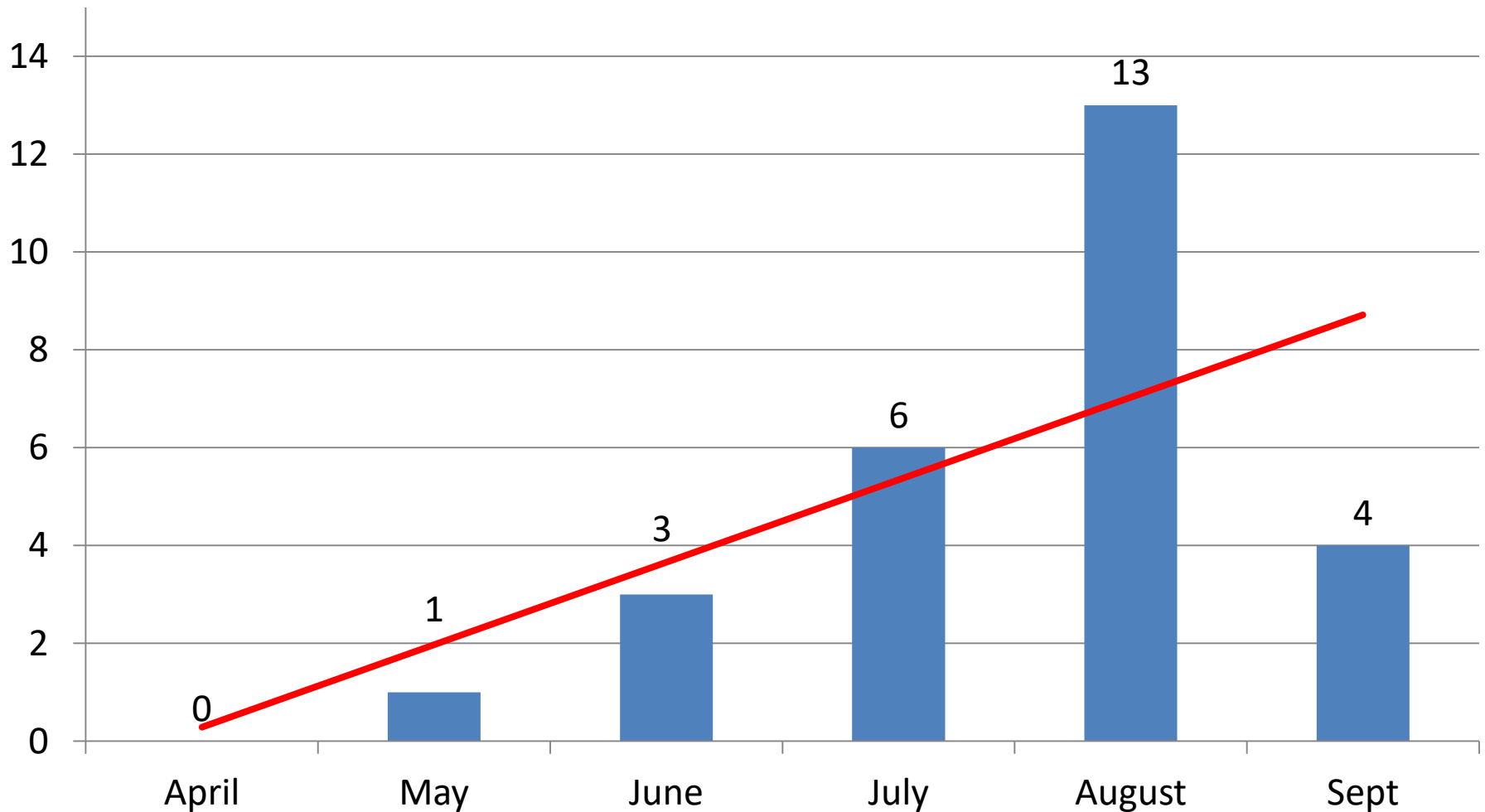


# Fatalities & Ambulance 2007-2017

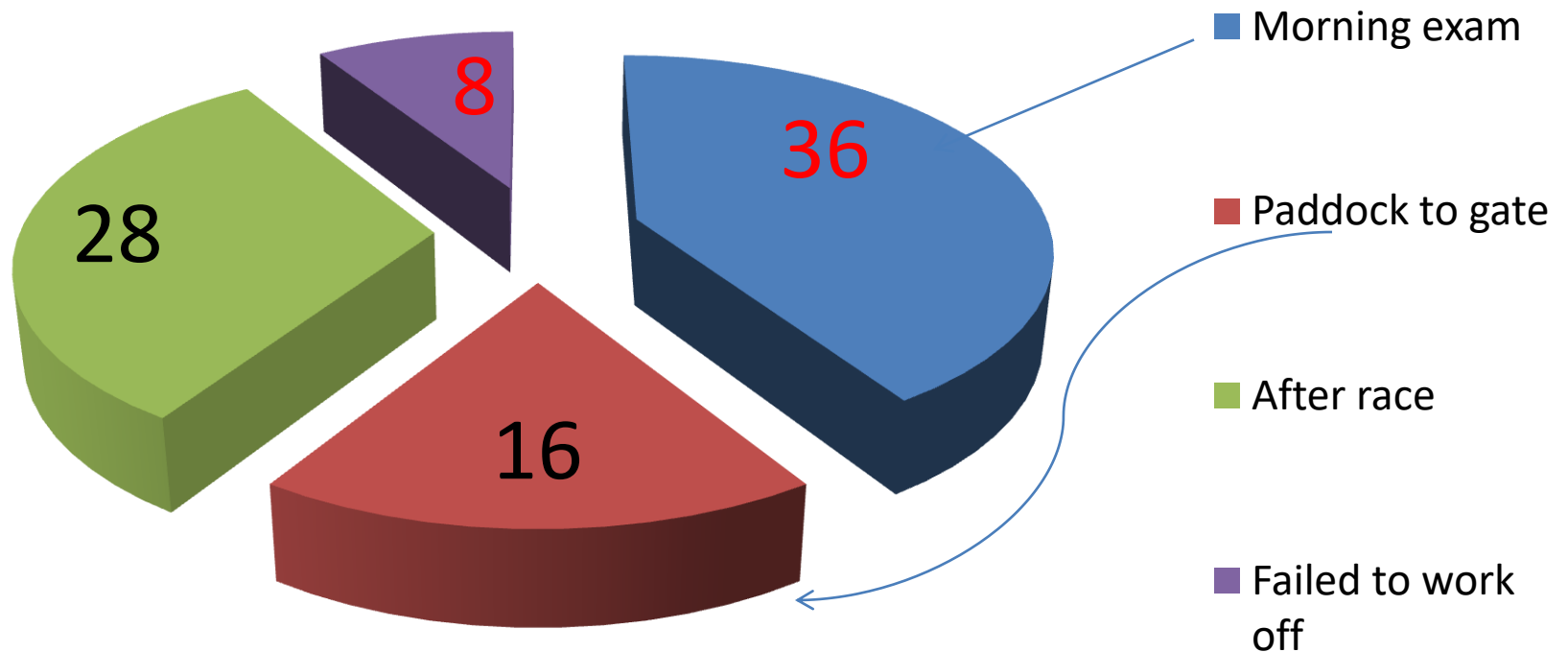




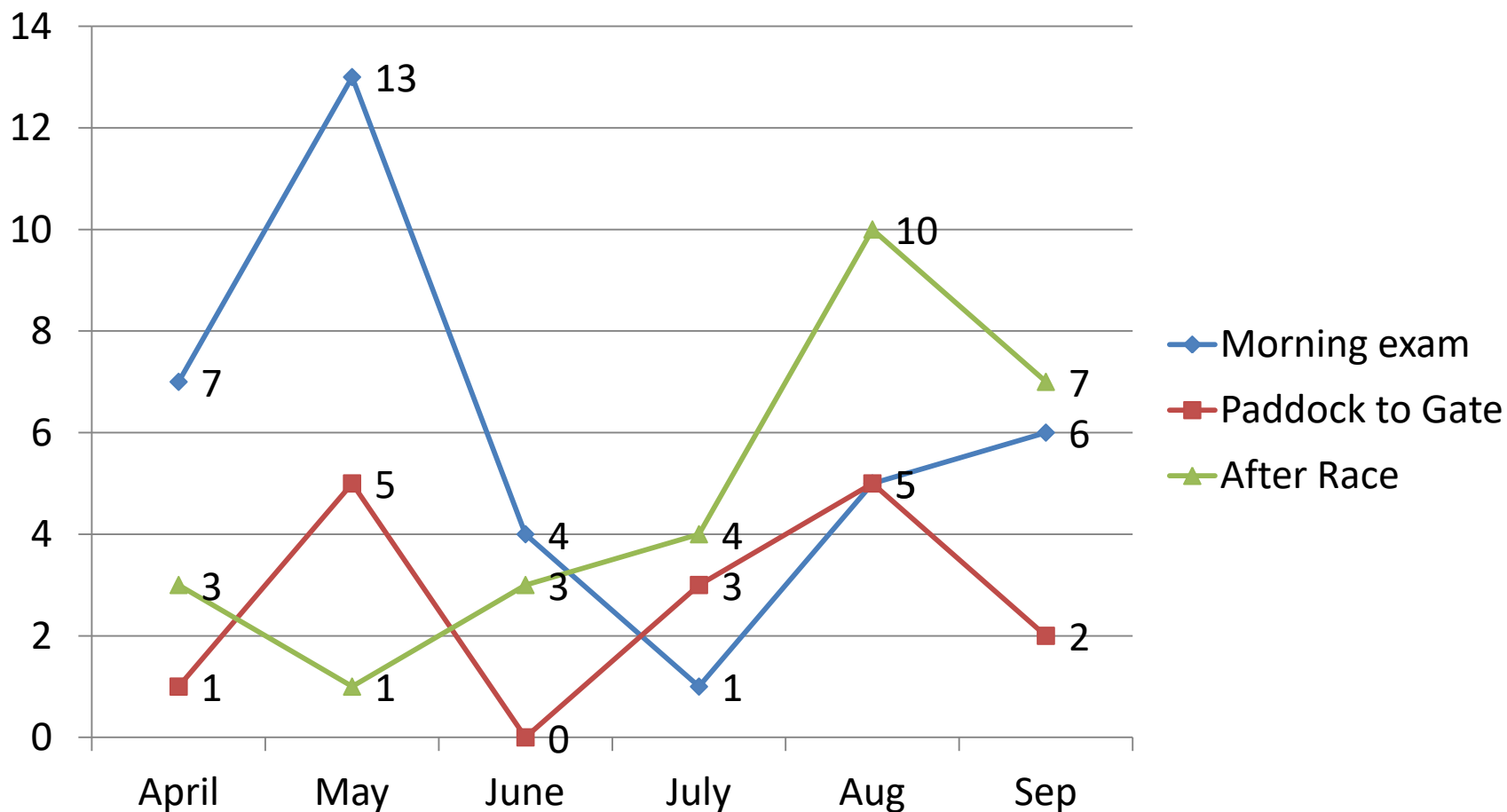
# Ambulance by month 2017



# Veterinary Pre Race Examinations. Observation from Paddock to finish Line & the Veterinarian's List

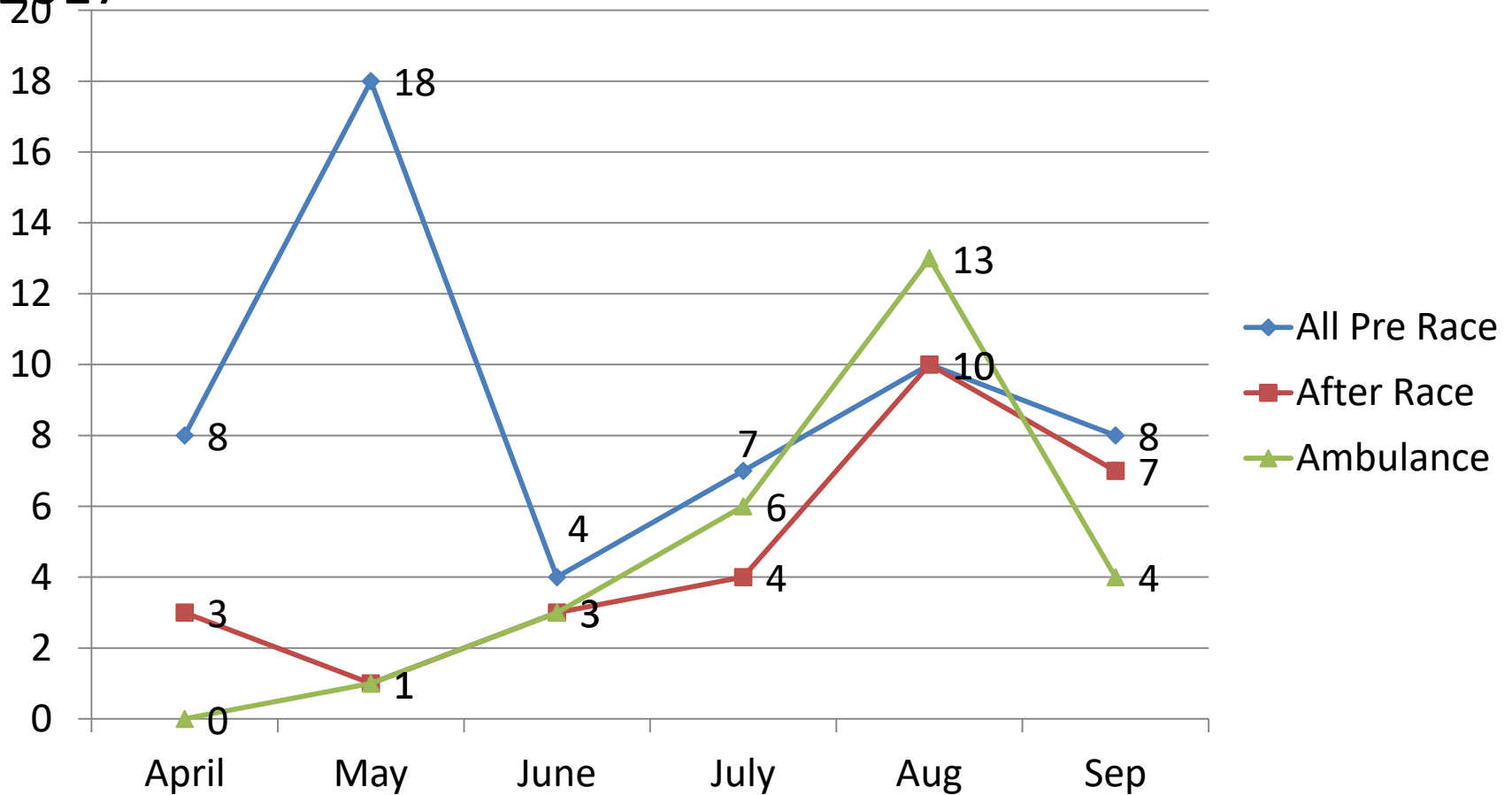


# Morning Exam/Paddock to Gate/After Race on Veterinarian's List by Month 2017



# All Pre race, After Race, and Ambulance leading to putting on Vet's List by Month

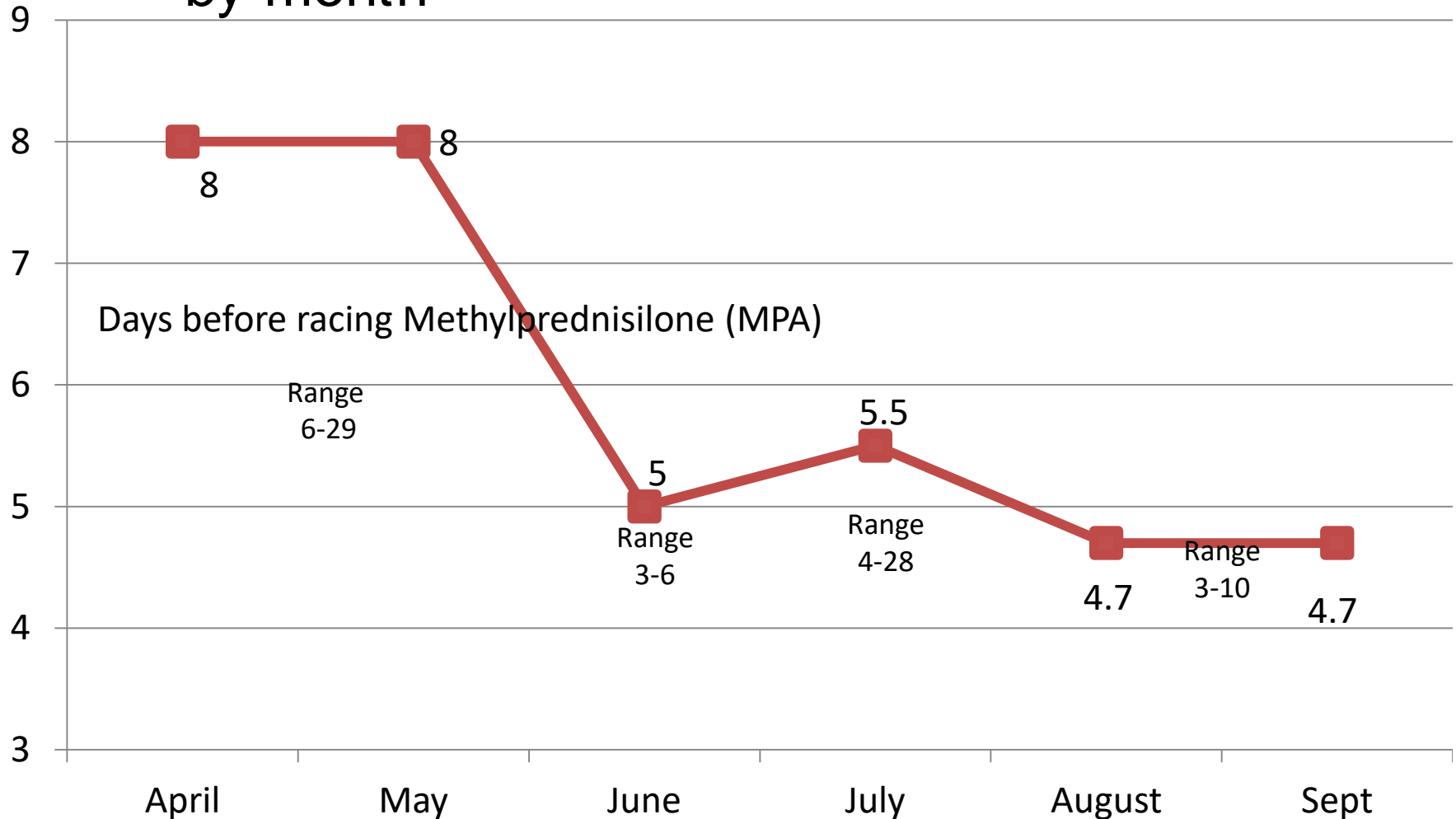
2017



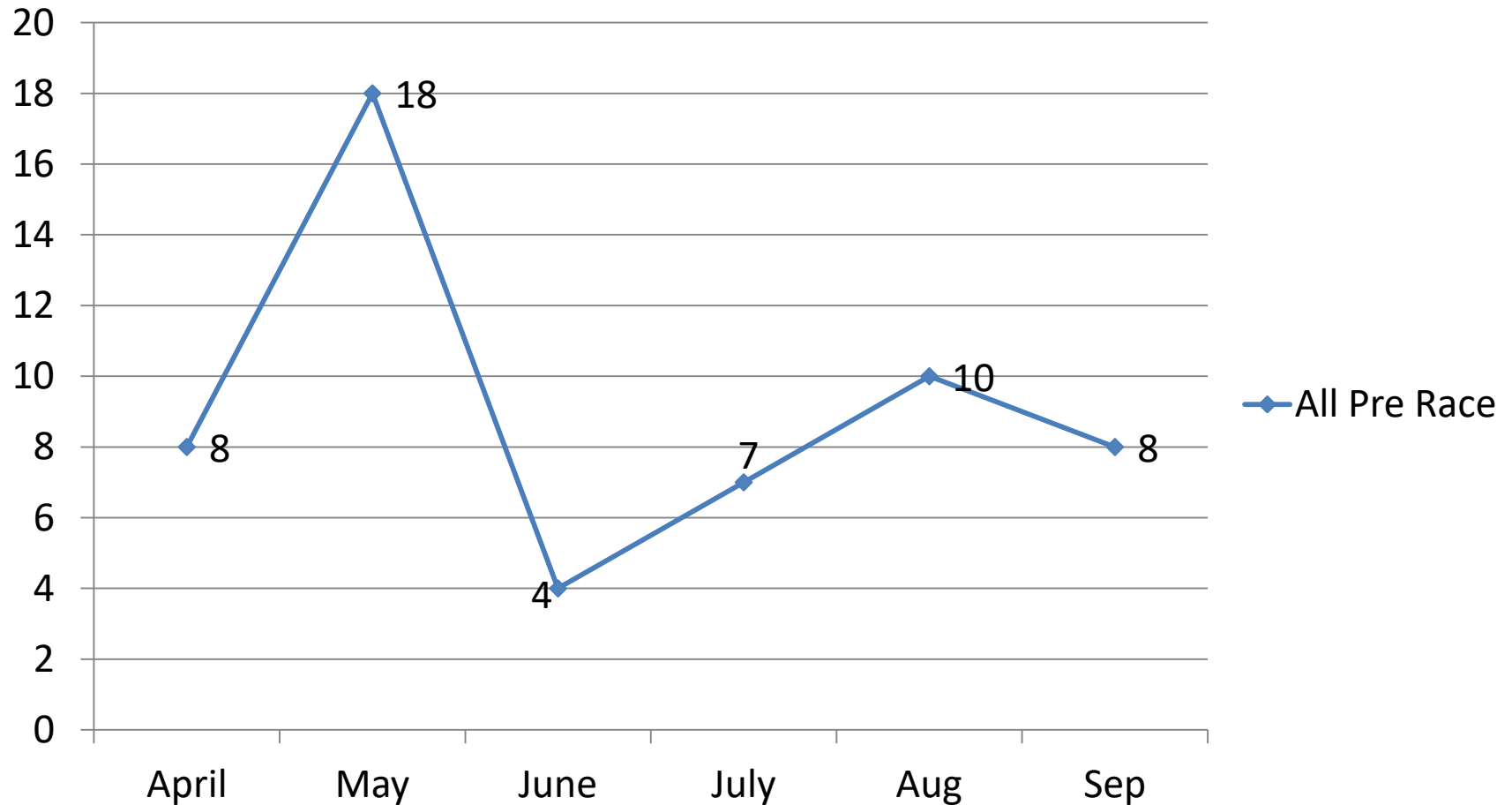
# Inflammation and anti inflammatory medication

- Inflammation has been recognized for thousands of years by:
  - Heat
  - Pain
  - Redness
  - Swelling
- Anti inflammatory medications (including corticosteroids and NSAID)
  - DO NOT TREAT THE CAUSE
  - They ***decrease***
    - Heat
    - Pain
    - Redness
    - Swelling

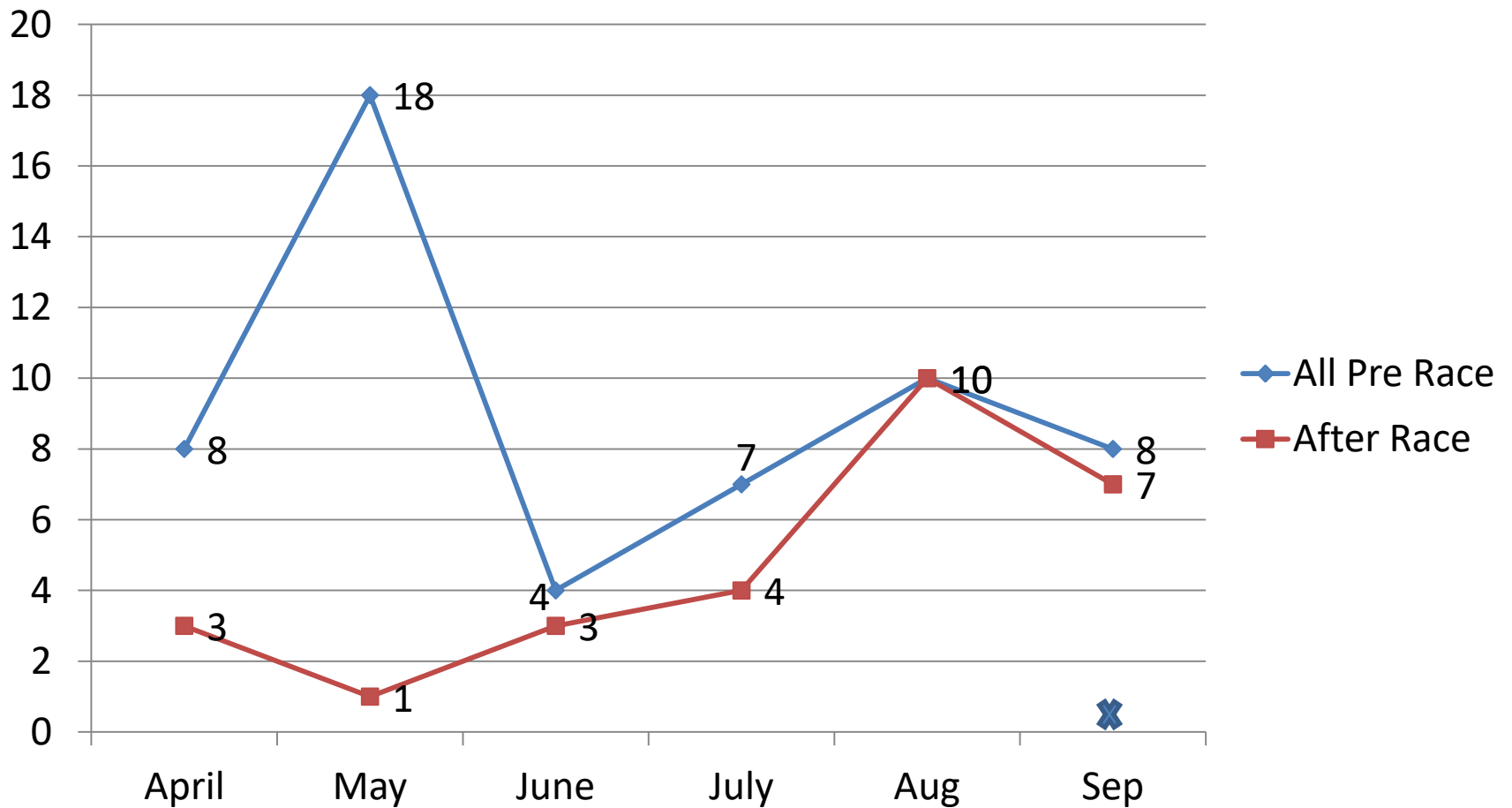
# Days before race for methylprednisilone (MPA) injection at EMD by month 2017



# All Exams Morning to Starting Gate, put on Veterinarian's List by Month 2017

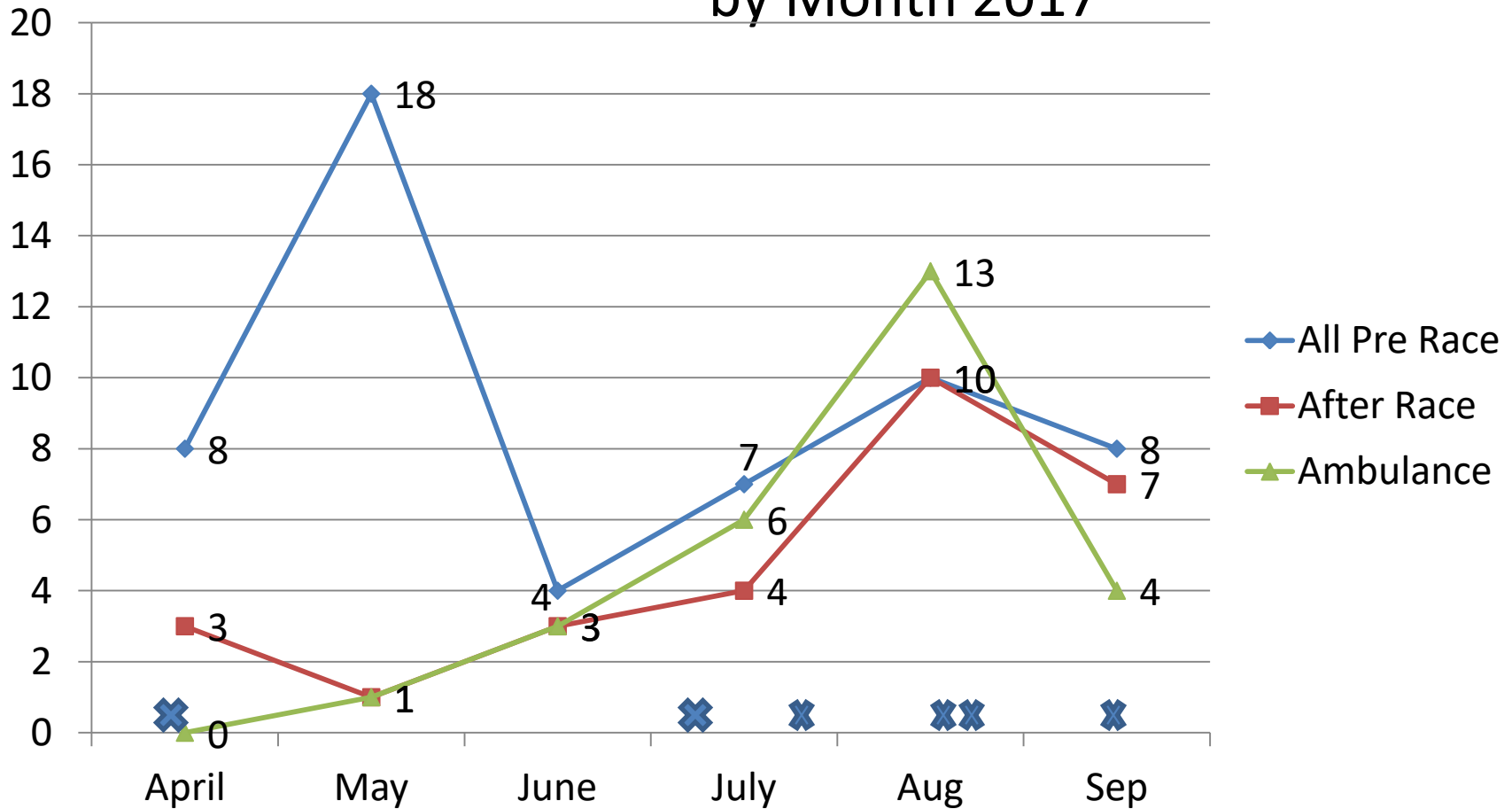


# All Exams Morning to Starting Gate, After Race Put on Veterinarian's List by Month 2017

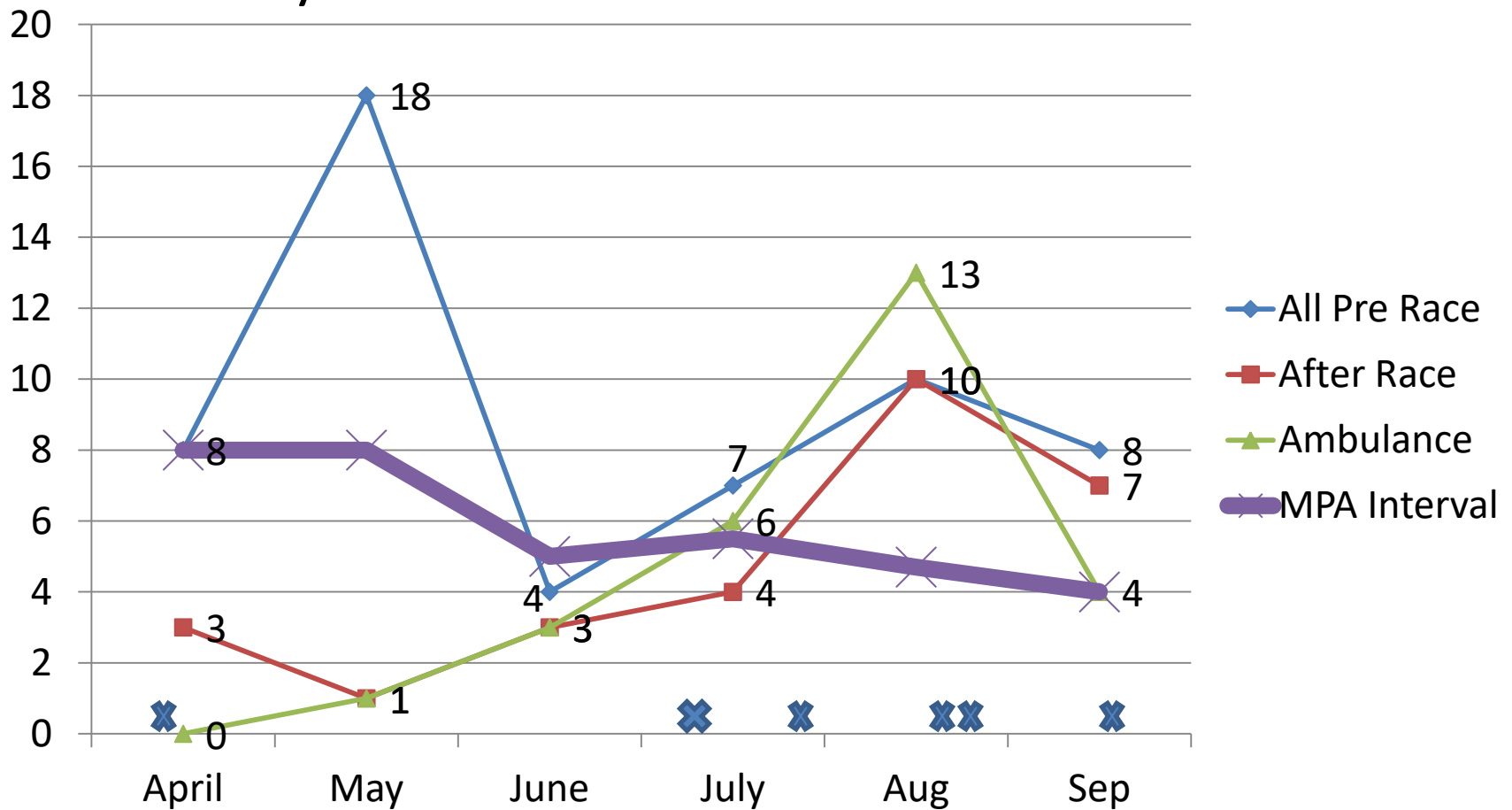




# All Exams Morning to Starting Gate, After Race and Ambulance put on Veterinarian's List by Month 2017

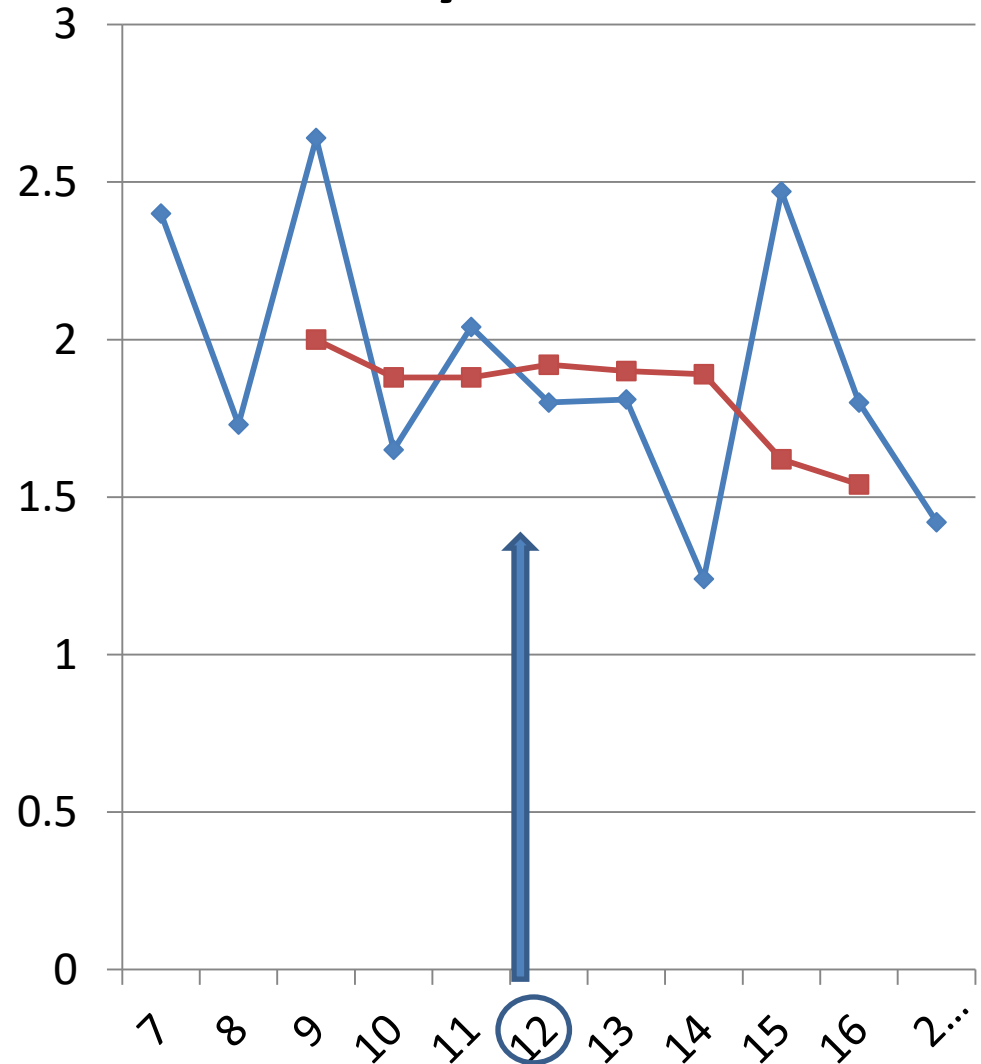


# Horses put on Vet's list from Pre Race - After Race Lameness, Ambulance use, and MPA days before the race by Month 2017

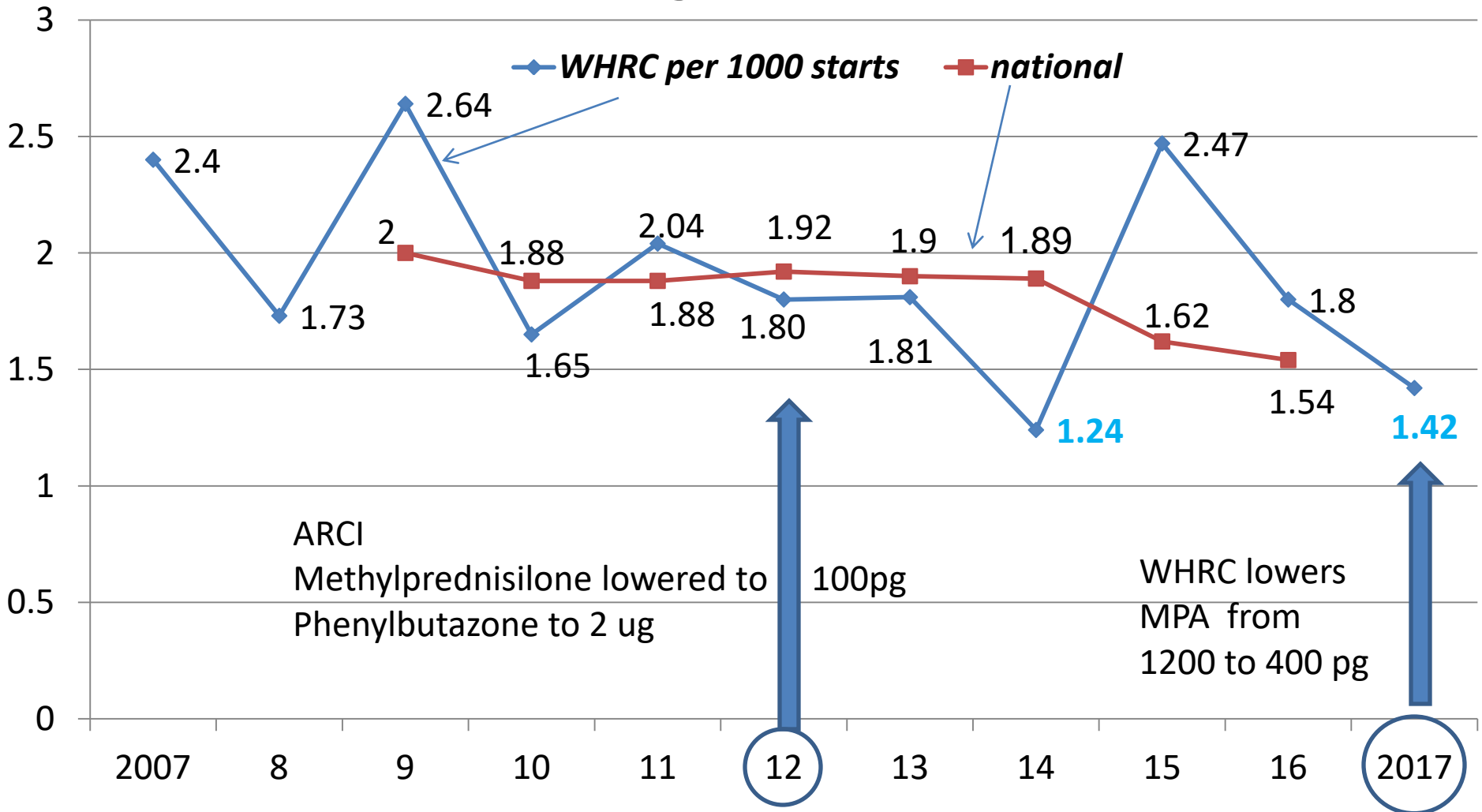


# What may be contributing to decreasing fatalities we are seeing in the last 10 years?

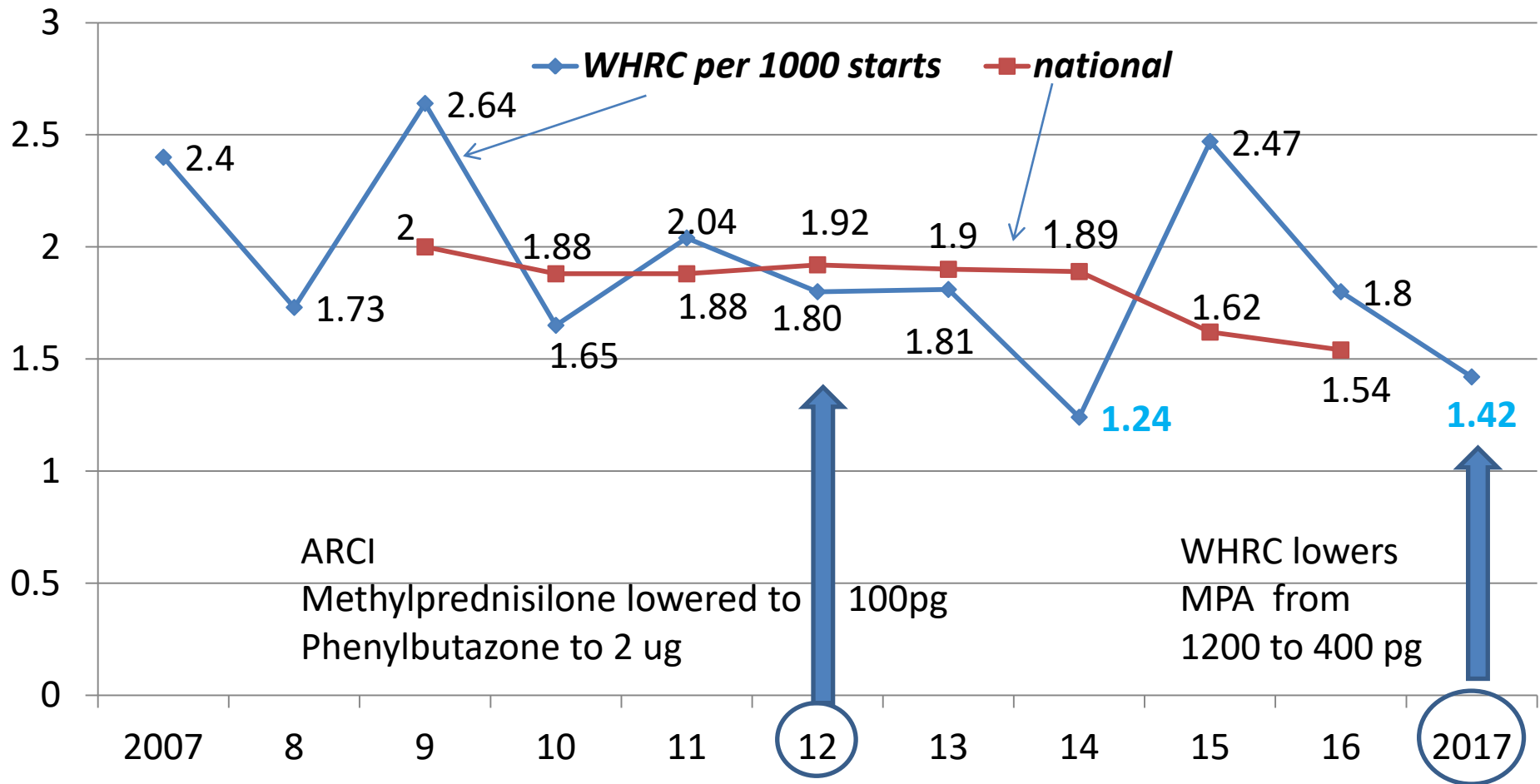
- Morning exams
- Paddock to Gate
- After Race inspection
- Veterinarian's List



# Fatalities from racing 2007-2017



# Fatalities from racing 2007-2017

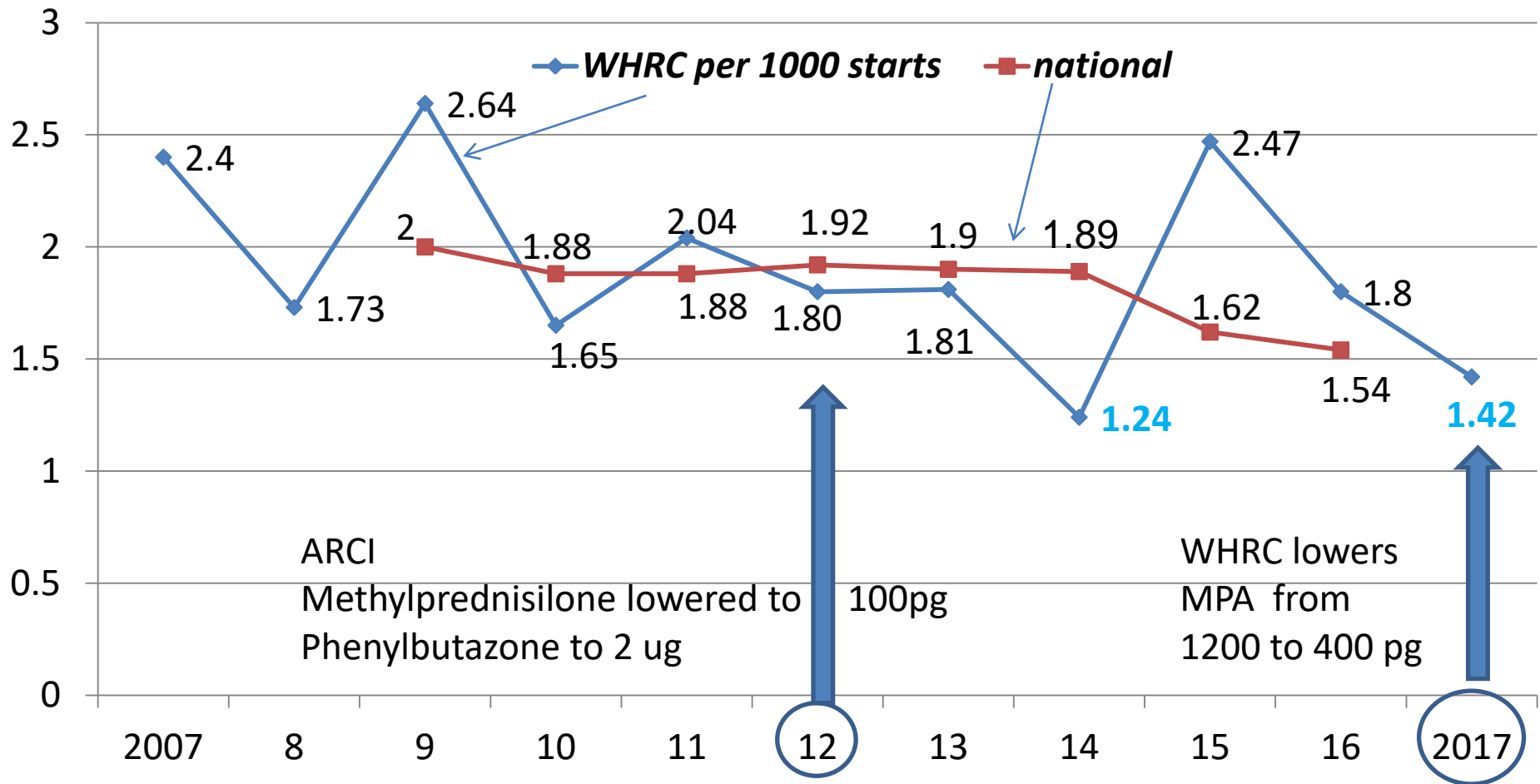


1) *The Use of intra-articular corticosteroids in the horse: what is known on a scientific basis.* CW McIlwraith. *Equine Vet J.* 2010

2) *RMTC Position Statement on Corticosteroids*

<http://rmtcnet.com/wp-content/uploads/2015/07/RMTC-Position-Paper-on-Corticosteroids.pdf>

# Fatalities from racing 2007-2017



1) *The Use of intra-articular corticosteroids in the horse: what is known on a scientific basis.* CW McIlwraith. *Equine Vet J.* 2010

2) *RMTC Position Statement on Corticosteroids*

<http://rmtcnet.com/wp-content/uploads/2015/07/RMTC-Position-Paper-on-Corticosteroids.pdf>

# Outstanding 2011 thru 2017

## Commission Veterinarian's Recommendations

- Adoption of RCI Model Rules for Equine Medications – (WHRC needs to continue to work toward **not away** from national standards).
- Remind trainers about the need to keep a good history on horses' winter activities (or non- activity), especially three year olds – to help prevent humeral fractures.
- Only double accredited labs (ISO and RMTC) be used for split testing to ensure testing standards comparable to WHRC primary lab.

# Equine Medical Director Concerns 2017

- **Methylprednisolone – WHRC (400pg) 4x RCI threshold (100pg)**
- **Dexamethasone – WHRC (500pg) 100x RCI threshold (5pg)**
- **Phenylbutazone and other NSAID >2x RCI threshold**
- **The above impair our ability to detect unsound horses and increase the risk of serious injury- horse and jockey**
- Our already high NSAID levels, are even higher during morning exams-12 hours before post time
  - These mask heat, pain, swelling during morning inspections
  - Icing legs before morning exams also mask inflammation
- **Sun Downs Medication Violation rate is excessive and needs to be addressed**



# Equine Medical Director Recommendations 2017

- **Urge the WHRC to work toward ARCI model rules for:**
  - ❖ **Medication thresholds**
  - ❖ **Furosemide (lasix/salix) administration\*\***
    - In contradiction to RCI recommendation
    - Not 3<sup>rd</sup> party administration – recommend direct regulatory oversight
- **Testing be increased at Sun Downs**
- **Trainers to maintain and submit treatment records performed by them**
- **Horse legs NOT iced before morning exams**
  - Not discussed in great detail but very important
  - Commonly enforced in many jurisdictions